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INDEX TO ASLIB PROCEEDINGS

VOLUME 2

A.E.G. Reader, 33
Abbreviations of titles of periodicals, 2, 4, 5, 223
Abgila, 22
Abstracting, Conference, 122
Abstracting Services Committee (Royal Society), 121, 122
Accommodation, 196, 197
Acheson Colloids, 192
'Activities of the "King Committee",' 115–16
Administration, 220, 229
Administrative Staff College, 193
Adrema, 208
Advisory Committee on the Scottish Central Library, 82
Advisory Service on Plastics, 116
African Abstracts, 167
Agricultural Economics Research Institute, 192
'Agriculture and allied interests', 156
Aircraft and Armament Experimental Establishment, 192
Allen, F. S., 205, 206
Allibone, Dr. T. E., 119
Aluminium Laboratories, 192
American Air Technical Intelligence, 46
American Institute of Physics, 118
Anglo-American Cataloguing Code, 143
Annual Conferences (Aslib), 41, 50, 87, 93, 150, 153, 155, 169–248
Annual Report (Aslib), 149–59
Appleton, Sir Edward, 55
Ardern, L. L., 214, 215
Arnold, D. V., 155, 156
Ashmolean Museum, 194
Ashworth, W., 154, 169, 170, 213, 212, 214, 215
—, 'Reorganization of Libraries', 201–12
Aslib, 58, 60, 82, 83, 94, 95, 96, 97, 99, 121, 123, 124, 127, 128, 129, 139, 141, 143, 149–59, 166, 167, 185, 186, 192, 219, 224, 243
— committees:
— —, Education, 93, 155
— —, Information and Library, 156, 182
— —, Publications and Editorial, 156, 243
— —, Conference and Meetings, 154, 171, 242
— —, Executive and Finance, 151, 182
— —, Mechanized Distribution of Information, 157
— —, British National Committee on Documentation, 157
— Conferences and Meetings, 153
— —, Annual, 41, 50, 87, 93, 150, 153, 155, 157, 169–248
— —, Bristol, 169–248
— —, Edinburgh, 49, 91, 152
— —, Liverpool, 99, 153
— —, London, 1, 2–48, 33, 39, 103, 105, 115, 127, 129, 139, 154
— —, Manchester, 50, 93
— —, Newcastle, 49, 51, 57, 67, 71, 77, 152
—, Council, 150
— Document Reproduction Service, 156
—, Education, 155
—, 'The future of Aslib', 179–84
—, Information and Library, 156
—, Northern Branch, 46, 49, 93, 95, 152, 153, 181, 185
— Publications, 49, 156, 242
—, Register of Specialist Translators, 124, 157
—, Relations with other organizations, 158
—, Scottish Branch, 49, 50, 152, 153, 181
—, 'The Year's Work', 149–59
Aslib Book-List, 156, 157, 243
'Aslib Directory', 124
Aslib Guides to Sources of Information, 156, 157
Aslib Information, 93, 97, 103, 150, 151, 152, 153, 156, 243
Aslib Proceedings, 93, 151, 152, 153, 156, 158, 243
Association Belge de Documentation, 222
Association of Special Libraries and Information Bureaux, *see* Aslib

B.N.B., *see British National Bibliography*
B.S.I., *see* British Standards Institution
B.S.I.B., *see* British Society for International Bibliography
B.U.C.O.P., *see* British Union Catalogue of Periodicals
Bale, John, 81
Baptist College, Bristol, 193
Bard, Dr. B. J. A., 'The value of an information service', 155
Bath City Library, 190, 193
Bath Drama Library, 194
Bath, Marquess of, 194
Bath Royal Literary and Scientific Institution, 190
Bath Royal United Hospital, 193
Bernal, Professor J. D., 223
'The best use of library statistics', 105, 110–13
Besterman, Theodore, 128, 161, 165
'Beverages and Food', 156
'The Bibliographic System of Classification', 7–13
'Bibliographical services: their present state and possibilities of improvement', 167
'Bibliographical Survey', 127–8, 158, 165–8
'Bibliotheca Phillippica', 194
'Bibliotheca Somersetensis', 191
Birkett, Miss F. M., 154
Birmingham Public Library, 188
Birmingham University, 202
Bishop Phillpott's Library, 193
Bishop, W. W., 208
Biske, V., 186
Bliss, Henry Evelyn, 7–13, 204
Board of Trade Technical Information Document Unit, 46, 115
Bodleian Library, 161, 187, 247, 248
Bonser, Dr. W., 155, 158
Booksellers' Association, 141
Bournemouth Public Library, 190
Bradford, Dr. S. C., 7, 150, 214, 222
Brightman, R., 49, 93, 152, 153, 154
—, 'Reference Books for the Works Library', 96
Bristol Aeroplane Co., 192, 194
Bristol and Gloucestershire Archaeological Society, 191

Bristol Baptist College, 193
'Bristol Bibliography', 191
Bristol Branch Library, Ministry of Works, 194
Bristol Cathedral Library, 193
Bristol City Library, 188, 189, 191, 192, 194
Bristol City Museum, 192
Bristol Conference (Aslib), 169–248
Bristol Grammar School, 193
Bristol Law Society, 193
Bristol Library Society, 189
Bristol Medico-Chirurgical Society, 193
Bristol Naturalists' Society, 192
Bristol University, 192, 193, 194
—, Institute of Education, 193
—, Library, 191
—, Medical Library, 193
—, Medical School, 193
—, School of Veterinary Science, 192
British Book News, 157
British Building Documentation Committee, 159, 184
British Cellophane, 192
British Commonwealth Scientific Official Conference Standing Committee, 124
British Council, 124, 141
British Federation of Master Printers, 125
British Museum, 116, 140, 141, 142, 143, 144, 161, 247
British National Bibliography, 82, 123, 139–45, 159
British National Book Centre, 213
British National Committee of the International Federation of Documentation, 157, 158
British National Committee on Building Documentation, 159, 184
British National Committee on Documentation, 124, 157
British National Co-operating Body for Libraries, 167
British National Map Bibliography, 144
British National Music Bibliography, 144
British Society for International Bibliography, 1, 149, 150, 156, 157, 182, 219, 222
British Standard Specifications, 72
British Standards Institution, 2, 3, 123, 158
British Union Catalogue of Periodicals, 82, 103, 158, 161–3, 184
Bromide prints, 36
Bronk, Dr., 117
Brown classification, 11
Brown, Dr. D. G., 50, 87, 152, 153
—, 'Problems of an Industrial Librarian', 87–90
Brown, Professor G. L., 119
Buckfast Abbey, 193
Building Documentation, British National Committee, 159, 184
Buildings and Equipment, 220, 223
Bulletin of the Institution of Mining and Metallurgy, 106
Burgess, L. A., 'The Bibliographic System of Classification', 7–13
Burleigh, C. J., 121
Burlington, Lord, 245
Bush, Vannevar, 223
Butchart, A. D., 83, 153
—, 'Information work in the small firm', 50, 153

C.A.R.E., 158
Cahiers de la Documentation, 166
Cahill-Byrne, M. G., 49, 152
California Technical Institute, 205
Callander, T. E., 209
Cambridge University, 161
Campbell, Dr. D. J., 185, 214
Campbell, D. K., 220
Carnegie United Kingdom Trust, 82, 83
Carter, Edward J., 167, 220
Cataloguing, 26–32, 64, 146–7, 201–12, 230
'Cataloguing of Government Publications', 146–7
'Cataloguing Rules used in the Library of the Scott Polar Research Institute', 221
Central Library for Students, 140
Central Medical Library Bureau, 33
Chaplin, A. H., 128
Cheltenham Ladies' College, 193
Cheltenham Public Library, 190, 192
Chemical Defence Research Establishment, 192
Chemistry and Industry, 123
Chibnall, B., 105
—, 'Publicity in the Kodak Research Library', 108–9
Clark, E. H., 169
Classification, 7–22, 64, 65, 142, 144, 201–12
Clifton College, 193
Coates, J. W., 185
Coblans, H., 209
Cockburn, Dr. J. G., 'Subject indexes to complete volumes of periodicals', 155
'Code International d'abréviations des titres de periodiques', 4
Coke family, 245–8
Cole, Miss B., 97
College Libraries, 227
College and Research Libraries, 165
Collison, R. L. W., 157, 218
—, 'The technique of answering enquiries', 155
Colon classification, 8, 14–22
Commercial libraries, 227
Committee on Industrial Productivity, 115
Committee on the Mechanized Distribution of Information, 157
Commonwealth Scientific Official Conference Standing Committee, British, 124
Conference and Meetings Committee (Aslib), 154, 171, 242
Conference of the Deutsche Gesellschaft fur Dokumentation, 34
Conference on Scientific Abstracting, 122
Conference on Scientific Information Services, 117
Co-operative for American Remittances to Europe Inc., 158
'Co-ordination of information work in a research organization', 155
Cope Collection, 191
Cope, S. Trehearne, 'Heraldry, Flags and Seals', 156
Copycat, 65
Copyright, 119, 120, 125, 143, 158
Cordonnier, 35
Cordonnier microreader (Microdoc), 35, 38
Corteen, H., 49
Cotteswold Naturalists' Field Club, 191
Couldrey, Miss M., 154, 155
Council (Aslib), 150–1
Cox, W., 144
Cummins, A. E., 155, 158

Cutter Classification, 11
Cyrillic characters, 2, 3, 158

D.S.I.R., *see* Department of Scientific and Industrial Research
Daily List of Government Publications, 146
Dartington Hall, 193
Davidsson, Ake, 222
Davies, Sir Llewellyn, 7
Day Natural History Collection, 192
De Gorter, B., 125
Dempster, Thomas, 'Historia esslesiastica gentis Scotorvm', 81
Department of Scientific and Industrial Research, 103, 115, 116, 124, 125, 149, 151, 156, 169, 184, 185, 186, 219
De Ricci, Seymour, 247
Desch, Dr. C. H., 122
Deutsche Gesellschaft fur Dokumentation, 34
Devon and Cornwall Record Society, 191
Devon County Library, 190
Devon and Exeter Institution, 190
Devonport Port Library, 192
Devonshire Association, 191
Dewey classification, 9, 11, 15, 16, 17, 18, 64, 65, 142, 144, 202
Dictionary of National Biography, 246
Didsbury College, Bristol, 193
Directories, 219, 225
Ditmas, Miss E. M. R., 2, 3, 23, 33, 49, 127, 139, 149, 152, 156, 158, 159, 169, 185, 217
—, 'The literature of special librarianship', 217–42
'Ditto' process, 209
Document Reproduction, 3, 158, 222, 234
Document Reproduction Service (Aslib), 156
Dorset County Museum, 191
Dorset Natural History and Archæological Society, 191
Downside Abbey, 193
Drachmann, Dr., 6
'Drafting of Questionnaires', 129–30
Drake, Miss D., 214
Drama Library, Bath, 194
Dumville, H. H., 186, 214
Dundee Public Library, 161
Dunsheath, Dr. Percy, 150, 169, 220
Duyvis, Donker, 219

Earl of Leicester's Library, 245–8
Eaton, J. J., 156
Edinburgh Conference (Aslib), 49, 91, 152
Edinburgh libraries—Union List of Periodicals, 83
Edinburgh University, 83
Ediswan Reader, 33, 36, 37
Editorial Committee (Aslib), 156, 243
'Editorial procedure: description of recently agreed standards of layout, etc.', 155
Education, 155
Education Committee (Aslib), 93, 155
Edwards, Geoffrey R., 'Service to Medical Libraries', 39–40
Elizabeth, Queen, 245
'Elements of Library Classification', 22
Emanuel Green Library, 191
Equipment, 220, 228
Evans, B. Agard, 151, 184, 213, 215, 243
Evans, Dr. Luther, 127, 167
Evans, T. C. D., 144, 'Cataloguing of Government Publications', 146–7
Executive and Finance Committee (Aslib), 151, 182
Exeter Cathedral Library, 193
Exeter Public Library, 190, 191
Exeter University College, 190, 191, 192
Exley, Miss M., 96, 169, 170, 185, 212, 213, 214, 215
—, 'Replanning of libraries', 195–200
'Experiences at the Earl of Leicester's Library at Holkham', 245–8

F.B.I., 124
F.I.D., *see* International Federation for Documentation
Fair Copying Declaration (Royal Society), 120, 125
Fairbairn, Dr., 97
Falconer, Sir John, 49, 152
Falmouth Public Library, 191, 192
Federation of British Industry, 124
Ferrari, Dr., 246
Filing, 232
Finance and Executive Committee (Aslib), 151, 182
Findlay, Dr. G. M., 121
Firestone Memorial Library, 205
Fischer, Mrs. Greta, 150
'Footnote references and bibliographies *v.* lists of books', 221
'Forms of Questionnaires. The effect of drafting on the results obtained', 129–37
Forsdyke, Sir John, 150
Foulis, Douglas A., 49, 152
Forbes Dispensary, 83
Forsdyke, Sir John, 150
Foskett, D. J., 18
Francis, F. C., 2, 155, 156
—, '*British National Bibliography*, 139–45
Fulford, Miss J., 155
Fullman, B., 156, 182
'Future of Aslib', 179

G.W.R. Mechanics' Institute Library, 190
Garrett, H. V., 220
Gauntlett, Miss, 214
Gesner, Conrad, 81
Gestetner process, 209
Gloucester Cathedral Library, 193
Gloucester County Library, 190
Gloucester Public Library, 190, 191
Goddard, S. C., 185
Goodwin, C. F., 220
Gosset, Miss M., 157, 214, 243
Goulden, G., 'Use of trade catalogues in information work', 155
Graneek, J. J., 185
Green, 186
Grenfell, D., 158
Grouping Specialist Libraries, 39–48
'Guide for the Preparation of Synopses', 121
'Guides to Sources of Information', 156, 157

H.M.S.O., 115, 145, 146, 147
Hall, J. G., 243
Hammond, Miss M. E., 162
Hampden, John, 158
Hampstead Public Library, 161
'Hand list of short titles of current periodicals in the Science Library', 222

Hanson, C. W., 186, 212
—, 'The best use of library statistics', 105–13, 155
Harris, Rev Samson, 194
Harrison, K. C., 221
Harrison, Miss S. M., 213, 214
Harrod, L. M., 156
Hassall, Dr. W. O., 157, 169, 170, 213, 243
—, 'Experiences at the Earl of Leicester's Library at Holkham', 245–8
Hatton, Sir Christopher, 245, 247
Heald, Stephen, 'Special factors in the organization of information services', 155
Heating, 200
Henderson Trust Library, 83
'Heraldry, Flags and Seals', 156
Hewetson, C. E. C., 154, 213, 243
Hinton, E. Austin, 49, 71, 152
—, 'Industrial, Technical and Commercial Information: the contribution of the public library', 57–66
Hirst, F. C., 213
His Majesty's Stationery Office, 115, 145, 146, 147
'Historia esslesiastica gentis Scotorvm', 81
Hobbs, J. L., 204, 205
Holkham Hall, 245–8
Holmstrom, Dr. J. E., 123, 124, 128
Hopf, R. H., 202
'How the manufacturer can help the librarian', 50, 153
Hughes, H. G. A., 128, 166
Hutchings, F. G. B., 94, 95
—, 'The training of the information officer', 93
Hutton, Professor R. S., 41, 42, 151, 156, 158
Hyams, H., 154
Hyett Library, 191

I.F.L.A., *see* International Federation of Library Associations
I.M.M. Abstracts, 106
I.S.A. Bulletin, 4, 5
I.S.O., 2, 3, 4, 5
Imperial Forestry Institute, 192
Index of Recent Articles, 106
Index to Scientific and Technical Translations, 157
Indexing, 87, 232
Industrial Libraries, 227
Industrial Productivity Committee, 115
'Industrial, Technical and Commercial Information: the contribution of the public library', 57–66
Information and Library Committee (Aslib), 156, 182
'Information Bureau administration', 153
'Information from the Advertisement Pages', 23–5
'Information Service: The contribution of the University', 67–70
Information Services Committee (Royal Society), 117–25
'Information Work in the Small Firm', 50, 153
'Inquiry into co-operation', 158
Institute of Advanced Legal Studies, 162
Institute of Experimental Psychology, 193
Institution of Electrical Engineers, 26
Institution of Mining Engineers, 105
Institution of Mining and Metallurgy, 105
'Intelligence—some fundamental principles', 51–5
'Interchange of Technical publications in Sheffield', 41–8
'Interlingual Scientific and Technical Dictionaries', 124
'Inter-Library Co-operation: The Regional Library Bureau', 77–80
International African Institute, 167
International Bibliographical Conference, 1950, 165
International Conference on Scientific Abstracting, 122
International Federation for Documentation, 2, 82, 128, 157, 158, 166, 182, 185, 219, 221
—, I.F.L.A. committee on special libraries and centres of information, 158
International Federation of Library Associations, 2, 127, 158, 166, 167, 182
—/FID Committee on special libraries and centres of information, 158
International Institute of Intellectual Co-operation, 4
International Library Committee of I.F.L.A., 158
International Organization for Standardization, 2, 3, 4, 5
International Standards Association, 2
'Interchange of Technical Publications in Sheffield', 41–8
'Introduction to the library and information services of a professional institution', 105–7
Ipswich Public Library, 161
Irish Central Library, 82

Jacobs, Miss Ruth M., 'Information from House Journals', 155
Jennes, C. W., 247
Jenkins, R. Trevor, 49, 152
Jennings, F. C., 50, 153
—, 'The organization of works visits', 50, 99–101
Johnston, Barbara, 221
Joint Committee on Library Co-operation, 82
Jones, D. C. Henrick, 'The best use of library statistics', 105
Journal of Chemical Education, 218
Journal of the Chinese Society of Naval Architects and Marine Engineers, 72
Journal of Documentation, 21, 55, 123, 156, 158, 166, 189, 243
Journal of Hellenic Studies, 5

Kaiser, I., 'Systematic Indexing', 87
Kaiser system, 87, 88
Karpel, B., 209
Kent, F. L., 4, 5, 154, 157, 158, 169, 170, 202
—, 'Library Resources of Bristol and the South-West', 187–94
'King Committee', 115, 116, 123
King, Dr. Alexander, 115, 116, 123, 182
—, 'The activities of the "King Committee",' 115–16
King's College Library, Newcastle, 66, 67, 68, 69, 74
Kodak Reader, 33, 36, 37
Kodak Research Library, 108
Kyle, Miss Barbara, 128, 154, 155, 167

L.A., *see* Library Association

Lamb, J. P., 41, 60, 157
—, 'The Interchange of Technical Publications in Sheffield', 41–8
Lamberth, D. L., 'The Limitations of Questionnaires', 131–7
Lambeth Conference, 58
Lambeth Public Libraries, 208
Lampitt, Dr. L. H., 122
Lancashire County Library, 188
Lancaster-Jones, Mrs. J., 154, 155, 158, 159
Laskey, David E., 161
Learned Society Libraries, 227
Lee, L. J., 205
Le Fanu, W. R., 156, 158
Leicester, Earl of, 245–8
Leicester, University College, 161
Le Maistre, C., 7, 23, 26, 128, 151, 157, 158
Library administration and methods, 220, 229
Library Association, 2, 82, 93, 96, 97, 109, 123, 140, 141, 146, 153, 158, 167, 168, 183, 186, 218, 224, 243
—, revised examination syllabus, 93, 94, 95, 96, 97, 105, 155, 158
Library Association Record, 243
Library and Information Committee (Aslib), 156, 182
'Library and information services available to all classes of membership of both Institutions', 105
'Library Classification: fundamentals and procedure', 22
'Library Co-operation in Scotland', 81–5
Library Co-operation, Post-war Planning Committee, 140
Library of Congress, 127, 128, 140, 167
— /Unesco Bibliographical Survey, *see* Unesco
Library Research Committee, 140
'Library Resources of Bristol and the South-West', 187–94
Library Science Abstracts, 243
Library World, 190
Lighting, 200
'Limitations of Questionnaires', 131–7
Lindsay, Sir Harry, 151
'List of Periodicals and Bulletins containing abstracts published in Great Britain', 122
'The Literature of Special Librarianship', 217–42
Literary and Philosophical Society, Newcastle, 66, 74, 79
Liverpool Conference (Aslib), 99, 153
Liverpool University, 161
Lloyd, G. A., 3, 5
Location aids, 233
London Conferences (Aslib), 1, 2–48, 33, 39, 103, 105, 115, 127, 129, 139, 154
London University School of Librarianship and Archives, 158
Long Ashton Research Station, 192
Lowenberg, Dr. Alfred, 158, 161, 162

McGrath, Miss M. E., 159
McColvin, E. R., 155, 156
McCutcheon, Alderman T., 49, 152
MacKenna, R. O., 152
—, 'Information Service: the contribution of the University', 67–70
Mackenzie, George, 81
—, 'The lives and characters of the most eminent writers of the Scots nation', 81
MacPherson, H. D., 203
Madden, Sir Frederick, 246
Malmesbury, Earl of, 194
Manchester Conference (Aslib), 50, 93
Manchester Joint Research Council, 95, 153
'Manual on Classification', 9
'Manual of Special Library Technique', 96
Marine Biological Association, 192
Marlborough College, 193
Martin, Dr. D. C., 115, 117
—, 'The work of the Information Services Committee of the Royal Society', 117–25
Mathew, Thomas, 189
May, Philip, 150, 159
Mechanization in libraries, 223, 236
Mechanized Distribution of Information (Aslib Committee), 157
Medical Research Council, 34
Meetings (Aslib), *see* Aslib
Metalliferous School of Mining, 192
Methods, 220, 229
Microcard, 169, 223
Microdoc reader, 35, 38
Microfilm, 2, 33–8, 198, 208, 210, 222, 223
—, Notes on readers, 37
Microphotography, 33–8, 223
Mikrophot reader, 33, 38
Military College of Science, 192
Ministry of Supply, 115, 116, 192
Ministry of Works, Bristol Branch Library, 194
Moholy, Mrs. L., 33, 34
Morley, Linda H., 'Contributions towards a special library glossary', 217
Morrab Library, 190
Morris, Lady, 167
Morris, Sir Philip, 169
Moyse Collection, 194
Murra, Kathrine Oliver, 127, 128, 165, 167, 219
Museum of Modern Art, 209
Museum of the History of Science, 192

N.C.L., *see* National Central Library
Napier, The Rev., 247
Nathan, Sir Frederic, 87
'National Biographies', 139
National Book League, 141, 158
National Central Library, 21, 46, 58, 66, 74, 78, 79, 80, 82, 83, 140, 141, 159, 187, 188, 190, 192, 193, 194
National Co-operating Body for Libraries, 141, 158
National Gas Turbine Establishment, 192
National Library of Scotland, 161
National Smelting Co., 192
Nature, 120, 124
Naval Construction and Engineer-in-Chief's Dept., 192
New York City University, 8
Newbury, K. W., 209
Newcastle Conference (Aslib), 49, 51, 57, 67, 71, 77, 152
Newcastle Literary and Philosophical Society, 66, 74, 79
Newcombe, Col. Luxmore, 140
Newport Public Library, 161
Nicol, T. S., 152
—, 'The Professional Societies' Contribution: The Library of the North-East Coast Institution', 71–5
Nicholson Committee, 182

Nicolson, Mrs. Molly, 150
North Devon Athenæum, 190
North East Coast Institution Library, 71
North of England Institution of Mining and Mechanical Engineers, 71, 74
Northern Branch (Aslib), 46, 49, 93, 95, 152, 153, 181, 185
Northern Regional Library Bureau, *see* Regional Library Bureaux
'Notes on the development of the concept of current complete national bibliography', 167
Nottingham University, 161
Nouvelles ABS and ASD, 166
Nuffield College, Oxford, 193

O.E.E.C., 116
Oldenburg, Henry, 117
O'Leary, J. G., 209
Organization, 229
'Organization and administration of a special library', 96
Organization for European Economic Co-operation, 116
Organization for the Interchange of Technical Publications in Sheffield, 41–8
'Organization of Knowledge in Libraries and the Subject Approach to Books', 8
'Organization of Knowledge and the System of the Sciences', 8
'Organization of Works Visits', 50, 99–101, 153
Osborn, Sir Samuel, 41
Oxford University:
—, Ashmolean Museum, 194
—, Bodleian Library, 161, 187, 247, 248
—, Dept. of Agriculture, 192
—, Institute of Experimental Psychology, 193
—, Museum of the History of Science, 192
—, Nuffield College, 193
—, Radcliffe Science Library, 187, 192
Ozalid process, 209

Paecht, Dr., 247
Page, Cadness, 143
Paint, Ministry of Supply report on, 215
Palmer, B. I., 18
Parke, Dr. V. E., 58, 68, 71, 115, 152, 155
—, 'Intelligence, some fundamental principles', 51–5
Parliamentary Grant-in-Aid for Scientific Publications, 119
Parry Soden collection, 193
Patent office, 46
Paton, J. S. P., 94, 95
—, 'Some observations on the training of an industrial information officer', 93
Pendleton, C. W., 155
Penzance Literary Club, 190
Penzance Public Library, 191
Phillipps, Sir Thomas, 194
Philosophical Transactions, 117
Photo-copying, 65, 198, 199, 209
Photostat process, 209
Pinney family, 191
Plastics, Advisory Service, 116
Pledge, H. T., 122
Plymouth Central Library, 190
Plymouth Proprietary Library, 190
Portsmouth Port Library, 192
Portsmouth Public Library, 190, 191, 192
Post-war Planning Committee on Library Co-operation, 140
'Preparation of technical literature', 153
Preservation of books, 232
Printing and Kindred Trades Federation, 125
'Problems of an Industrial Librarian', 87–90
'Problems of the Technical Society Library', 91–2
Proceedings of the B.S.I.B., 156
Professional institution libraries, 227
'Professional Societies' Contribution. The Library of the North East Coast Institution', 71–5
'Prolegomena to Library Classification', 22
'The Public Library as an aid to industry and research', 41
Publications Committee (Aslib), 156, 243
'Publicity in the Kodak research library', 108–9
Publishers' Association, 123, 141, 143
'Putting the special library over to its users', 105–9

'Qualifications of special librarians and information officers', 93
Quarr Abbey, 193
Questionnaires, 129–37

R.I.B.A., 214
Radcliffe Science Library, 187, 192
Raine, A. H., 50, 93, 97
Ranganathan, Dr. S. R., 14, 17, 18, 21, 22, 217
Readex, 223
'Rearranging and Recataloguing a Reference Library of Books', 26–32
Recataloguing, 26–32, 207
Reclassification, 206
'Recommendations adopted by the Royal Society Scientific Conference', 93
Recordak process, 208
Recordak reader, 36, 37
Redwood, Robert, 189,
Reference Books, 224, 238
'Reference Books for the works library', 96
Regional Library Bureaux, 58, 65, 66, 74, 82, 187, 188, 190, 193, 194
—, 'Inter-library co-operation: the regional library bureau', 77–80
Register of Specialist Translators, 124, 157
Renold, Sir Charles G., 50, 153
'Reorganization of Libraries', 201–12
'Replanning of Libraries', 195–200
'Report of Proceedings of the 1st Conference of Aslib', 220
'Report of the Royal Commission on National Museums and Galleries', 139
Research, 125
'Research and the smaller firm', 95
Review of Documentation, 157, 166
Roborough Library, 190
Roscoe, William, 246
Rotol, 192
Royal College of Surgeons, 83
Royal Geological Society of Cornwall, 192
Royal Institute of British Architects, 214
Royal Institute of International Affairs, 221
Royal Literary and Scientific Institution, Bath, 190
Royal Naval College, 192
Royal Society, 71, 84, 93, 94, 117, 118, 119, 121, 122, 123, 185

—, Abstracting Services Committee, 121, 122
—, Empire Scientific Conference, 219
—, Fair Copying Declaration, 120, 125
—, Information Services Committee, 117–25
—, 'Recommendations adopted by the Royal Society Scientific Conference', 93
—, Scientific Information Conference, 84, 115, 117, 118, 121, 122, 123, 157, 184, 185, 219
Royal Society of Medicine, 34, 39–40
Royal United Hospital, Bath, 193

Sabet, A., 159
Saenger, Dr. E., 162
St. Boniface Theological College, 193
Salisbury Cathedral Library, 193
Salisbury Theological College, 193
Savage, Ernest A., 218
Sayce, Dr., 33
Sayers, W. C. Berwick, 9
Schafer, Miss B., 186, 214, 215
School of Librarianship and Archives, London, 158
Schultze, Dr. R. S., 156, 242
Schuster, Dr. Edgar, 34
Science Museum Library, 46, 116, 124, 161, 182, 222
Scientific Abstracting Conference, 122
'Scientific Information', 115
Scientific Information Services Conference, 117
Scottish Branch (Aslib), 49, 50, 152, 153, 181
Scottish Central Library, 82, 83, 84
Scottish Library Association, 82, 83
Scottish Regional Bureaux, 81–5
Scottish Union Catalogue, 82, 83
Scurfield, Miss Janetta G., 58, 65, 70, 152
—, 'Inter-library co-operation: the Regional Library Bureau', 77–80
'Select list of references to the literature of special librarianship', 224
'Self-Perpetuating Classification', 21
Selly Oak Theological College, 161
Sen, Mrs. P., 128
'Service to Medical Libraries', 39–40
Sharp, Dr. L. W., 152
—, 'Library Co-operation in Scotland', 81–5
Sharr, F. A., 213, 214, 243
Sheffield Experiment, 41–8, 165
Sheffield Technical Library Research Bibliographies, 46
Sheffield, the interchange of technical publications in, 41–8
Shelving, 196
Sherborne School, 193
Shimmins, C. J., 50, 153
Shires, Geoffrey A., 243
—, 'Information from the advertisement pages', 23–25
Silvey, Robert J. E., 'Drafting of Questionnaires' 129–8
Simons, E. N., 153
—, 'How the manufacturer can help the librarian', 50
—, 'The preparation of technical literature', 50
Simpson, Miss K. M. L., 'The co-ordination of information work in a research organization', 155
'Some observations on the training of an industrial information officer', 93
Somerset Archæological Society, 191
Somerset Law Society, 193
'Sources of information for fundamental education with special reference to education for literacy', 127
Southampton Public Library, 190
Southampton University College, 190, 191, 192
Southport Public Library, 161
South-Western Regional Library System, 187–94
'Special factors in the organization of information services', 155
Special Libraries Association of America, 46, 96, 219
Spence, Mrs. Margaret, 49, 50, 153
Staff, 199
'Standardization in Documentation', 2–6
Standing Scientific Library and Technical Information Committee of the Advisory Council on Scientific Policy (Nicholson Committee), 182
Stanley, J. F., 151
Statistics, library, 105, 110–13
Stavely, R., 158
Stewart, J. D., 158
Stokes, Roy, 243
Strickland, J. T., 208
Stripdex, 28, 29, 31
Stuckey Lean Collection, 194
'Subject indexes to complete volumes of periodicals', 155
Subject Index to Periodicals, 82
Sullivan, Miss N., 151
Sussex, Duke of, 246
Swansea, University College, 161
Swindon Public Library, 190, 192
'System of Bibliographic Classification', 9
Symposium on Classification, 7–22
'Symposium on Methods of Grouping Specialist Libraries', 39–48
Symposium on Microphotography from the user's point of view, 33–8
Symposium on the Training of the Information Officer, 50
'Systematic Indexing', 87

T.I.D.U., 46, 115
Tauber, M. F., 201, 206
Taunton Public Library, 193
Tavistock Abbey, 190
Technical Committee OC/20 Documentation Standards, 158
Technical Information Document Unit, 46, 115
Technical Information Services Panel, 115, 116, 123
'Technique of handling enquiries', 155
Tennant, S. H., 84
'Textiles and allied interests', 156
Third International Congress on Librarianship and Bibliography, *see* International Federation of Library Associations
Thomas, P. W., 152
—, 'Problems of the Technical Society Library', 91–2
Thomerson, Miss L. G., 154, 156, 214
Thompson, A., 214
Thomson-Houston camera, 33
— reader, 37, 38
Thorold and Lyttelton Library, 193
Tite Somerset Collection, 191
Tijdschriften, Titelafkortingen, 4

Tizard, Sir Henry, 151
Tooke, A. E., 157
Torquay Public Library, 194
Training for special librarianship, 223, 237
Training of the Information Officer, 50, 93–7
Transactions of the Institution of Mining Engineers, 106
Translated Contents Lists of Russian Periodicals, 124, 184
Translators, Register of Specialist, 154, 157
Transliteration (of Cyrillic characters), 2, 3, 158
Truro Cathedral Library, 193
Truro City Free Library, 191
'Two Special Library Problems', 105

U.D.C., 11, 18, 26, 30, 73, 81, 106, 108, 123, 158, 202, 207, 214, 221
Unesco, 82, 120, 121, 122, 127, 158, 167, 168
—, Book Coupons, 158
—, Conference on Scientific Abstracting, 122, 158
—, General Conferences, 127
—, 'Interlingual Scientific and Technical Dictionaries, 124
—, International committees, 166
—, Library, 209
—, Library co-operation with C.A.R.E., 158
— /Library of Congress Bibliographical Survey, 127–8, 158, 165–8
—, National Co-operating Body for Libraries, 141, 158
—, U.K. Commission, 128, 167
Union List of Periodicals in Edinburgh libraries, 83
Union List of Serials, 4, 82
United Nations Educational, Scientific and Cultural Organization, *see* UNESCO
Universal Decimal Classification, 11, 18, 26, 30, 73, 81, 106, 108, 123, 158, 202, 207, 214, 221
University College, Exeter, 190, 191, 192
University College, Leicester, 161
University College, Southampton, 190, 191, 192
University College, Swansea, 161
University Grants Committee, 116
University Libraries, 227
University of Birmingham, 202
University of Bristol, *see* Bristol University
University of Cambridge, 161
University of Edinburgh, 83
University of Liverpool, 161
University of London School of Librarianship and Archives, 158
University of New York City, 8
University of Nottingham, 161
University of Oxford, *see* Oxford University
Urquhart, Dr. D. J., 128, 151, 156, 157, 184, 186, 213, 242
'Use of trade catalogues in information work', 155
Uvarov, E. B., 213

'Value of an information service', 155
Verry, H. R., 35
Vickery, B. C., 242
Vinci, Leonardo de, 246
Vornorm, 4

Waterworth, E. N., 169
Watling, H. J., 157
Watson reader, 36, 38
Watts, W. G., 'An introduction to the library and information of a professional institution', 105–7
Wells, A. J., 139, 141
—, 'The Colon Classification', 14–22
Wells Cathedral Library, 193
Wells Theological College 193
West Midlands Region, 188
Weymouth Public Library, 190
White, W. E., 157
Whitrow, Mrs. A. M., 156
Wigglesworth Library, 192
William Beckford's Collection, 194
Wills, W. D. & H. O., 192
Wilson, H., 33
Wilson, Leslie, 149, 169
—, 'The future of Aslib', 179–84, 186
Wiltshire County Library, 190
Winchester Chapter Library, 193
Winchester City Library, 191
Winchester College, 193
Withers, Dr. J. C., 153
—, 'Information Bureau administration', 155
Woledge, G., 128, 151, 156, 159, 186
Wolff, Miss L., 153
Wood, Miss A. E., 202
'Work of the Information Services Committee of the Royal Society', 117–25
Working Party of the Organization for European Co-operation, 116
Works Libraries, 41
World List of Scientific Periodicals, 4, 5, 82, 124, 222
Wray reader, 36
Wright, J. E., 33, 35, 39, 96, 105, 151, 156, 169, 213, 215
—, 'Rearranging and Recataloguing a Reference Library of Books', 26–32

Xerography, 223
Xylonite label holders, 30

Yale University Law Library, 245
'Year's Work of Aslib', 149–59
Yeovil Public Library, 191
Young, J. D., 185

Zeitschriftenkurztitel, D.I.N. 1502, 4
Zinc Development Association

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TABLE OF CONTENTS

Standardization in documentation, by *Miss E. M. R. Ditmas, G. A. Lloyd* and *F. L. Kent*, 2.

The Bibliographic System of Classification, by *L. A. Burgess*, 7.

The Colon Classification, by *A. J. Wells*, 14.

Information from the advertisement pages, by *Geoffrey A. Shires*, 23.

Rearrangement and recataloguing of a library of books, by *J. E. Wright*, 26.

Symposium on microphotography from the user's point of view, by *Miss E. M. R. Ditmas, H. E. Wilson, Mrs. L. Moholy* and *H. R. Verry*, 33.

Notes on microfilm readers, by *Miss E. M. R. Ditmas*, 37.

Service to medical libraries, by *Geoffrey R. Edwards*, 39.

The interchange of technical publications in Sheffield, by *J. P. Lamb*, 41.

Intelligence—some fundamental principles, by *Dr. V. E. Parke*, 51.

Industrial, technical and commercial information, the contribution of the public library, by *E. Austin Hinton*, 57.

Information service : the contribution of the university, by R. O. *MacKenna*, 67.

The professional societies' contribution : the library of the North East Coast Institution, by *T. S. Nicol*, 71.

Inter-library co-operation : The Regional Library Bureau, by *Miss Janetta G. Scurfield, F.L.A.*, 77.

Library co-operation in Scotland, by *L. W. Sharp, M.A., Ph.D.*, 81.

Problems of an industrial librarian, by *D. G. Brown, Ph.D., A.R.I.C.*, 87.

The problems of the technical society library, by *P. W. Thomas, B.Sc.(Eng.), A.M.I.C.E., F.C.I.S.*, 91.

The training of the information officer, 93.

The organization of works visits, by *F. C. Jennings*, 99.

TABLE OF CONTENTS

An introduction to the library and information services of a professional institution, by *W. G. Watts*, 105.

Publicity in the Kodak Research Library, by *B. Chibnall*, 108.

The best use of library statistics, by *C. W. Hanson*, 110.

The activities of the 'King Committee', by *Dr. Alexander King*, 115.

The work of the Information Services Committee of the Royal Society, by Dr. *D. C. Martin*, 117.

Unesco/Library of Congress Bibliographical Survey, 127.

The drafting of questionnaires, by *Robert J. E. Silvey*, 129.

The limitations of questionnaires, by *D. L. Lamberth*, 131.

The British National Bibliography, by *F. C. Francis*, 139.

Cataloguing of government publications, by *T. C. D. Evans*, 146.

The work of Aslib, July 1948 to December 1949, 149.

British Union Catalogue of Periodicals, Sixth Annual Report, 161.

Appendices, 165.

Introduction (25th Annual Conference), 169.

Conference and Meetings Committee, 171.

List of delegates, 173.

The future of Aslib, by *Leslie Wilson, M.A., F.R.E.S.*, 179.

The library resources of Bristol and the South-West, by *F. L. Kent, M.A.*, 187.

Replanning of libraries, by *Miss M. Exley, F.L.A.*, 195.

Reorganization of libraries, by *W. Ashworth, B.Sc., F.L.A., A.R.P.S.*, 201.

The literature of special librarianship, by *Miss E. M. R. Ditmas, M.A.*, 217.

Experiences at the Earl of Leicester's library at Holkham, by *W. O. Hassall, M.A., D.Phil., F.S.A.*, 245.

THE WORK
OF
ASLIB

For the Year ended December, 1950

CALCUTTA UNIVERSITY
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THE WORK OF ASLIB

REPORT of Council for the year ended 31 December, 1950, for presentation at the Annual General Meeting on 25 April, 1951.

Contents

Section A — *Introduction.*
Section B — *Finance.*
Section C — *Membership.*
Section D — *Conferences and Meetings.*
Section E — *Education.*
Section F — *Information Bureau and Library.*
Section G — *Publications.*
Section H — *Northern Branch.*
Section I — *Scottish Branch.*
Section J — *New Branches and Subject Groups.*
Section K — *Staff.*
Section L — *Relations with other Organizations.*
Section M — *Conclusion.*

Appendix I — *Honorary Officers, Members of Council and of Council Committees, and Branch Officers.*
Appendix II — *Staff.*
Appendix III — *Representatives on other bodies.*

Section A—Introduction

The disturbed national and international atmosphere during 1950 has not been without its effects on the affairs of the Association. Printing disputes have frequently delayed the appearance of Aslib publications and the scarcity of labour has made staff recruitment difficult. Notwithstanding these and other factors, the Council looks back on 1950 as a notable milestone in Aslib's history.

The year, it is true, has been characterized less by momentous achievement than by sound and far-reaching internal reorganization which promises well for the expansion contemplated in the coming years. Removal from the cramped Bloomsbury Street rooms to the premises, more appropriate to an organization of national status, at 4 Palace Gate, London, W.8, were completed in January. For the first time in 26 years the Association can now boast a library housed in apartments worthy of the name and, provided the weather remains fair, committees can meet in the reasonable comfort of the glass-enclosed verandah, free from the fear of banishing the office staff from their lawful pursuits. For the first time, also, the possession of his own room enables the Director to entertain visitors in comfort and, more important, without a background of typewriters and telephones. One of Aslib's proudest moments was when the President stood at the head of the broad staircase and welcomed the first guest to his own house-warming party.

The process of settling into and equipping the new premises, and the readjustment of both staff and office routine which the move brought in its train, necessarily took priority over new projects. Yet, in the ensuing months it did prove possible, not only to put domestic affairs on a stable footing but to set in motion plans that had long lain dormant for want of money and even, in a limited sense, to start the more arduous work of breaking new ground. The following paragraphs outline the extent of the progress made.

Section B—Finance

The accounts for the year 1950 are of particular interest because they show for the first time the nature of Aslib's financial commitments in the new accommodation. From this point of view they are reassuring, and especially so since, in spite of the continual rise of costs generally, and mainly on items over which the secretariat has no control, a surplus comparable with 1949 has been obtained. This is because for the year 1949 grant-earning subscriptions were £3,600, but the maximum grant which could be obtained was £3,000. In 1950, grant-earning income from subscriptions and donations reached £4,015, of which £4,000 earned grant.

There is, however, no reason for satisfaction or complacency. As a condition of grant, Aslib undertook to raise for 1950 grant-earning income of not less than £4,000. This target had not been reached by the end of the year and it was only through generous donations, given later but specifically offered to finance 1950 activities, that the minimum of £4,000 was obtained. The position is extremely serious, for in 1951 an income of not less than £5,000 should be obtained, and failure to reach this figure could mean withdrawal of all grant. This means that many new members must be recruited, and to do this the membership campaign already started must be most vigorously conducted.

During 1950 further items of equipment and furniture have been obtained against the special grant approved for this purpose, and details are given below of further expenditure which has been approved for 1951:—

Equipment	£1,300
Publicity	£1,000
New Branches and Groups	£ 600
Membership Campaign Secretary ..	£ 400

The Association has been greatly helped by the D.S.I.R., and particularly by Mr. Spencer and Miss Sullivan, in its negotiations for these grants,

Section C—Membership

1. At the end of December the membership numbered 1,038,* compared with 1,052* at the same time in 1949. This decline appears to be due, firstly, to the somewhat stronger line taken towards members whose subscriptions were overdue, and, secondly, to resignations provoked by the increased rates of subscription. Resignations in the latter category had been anticipated but the effect was such that home subscription revenue was only £200 greater than in 1949.

2. The approximate percentage distribution of members among the main categories of membership are shown in the following table side by side with comparable figures for 1949 :—

Category	1949	1950
Non-profit-making bodies ..	32.3	32.4
Individuals	19.1	18.0
Industrial and Commercial Firms	20.0	19.4
Overseas members of all categories	19.7	20.5
British Government Departments*	8.9	9.7

3. Sanction was given in November for the expenditure of a Special Grant administered by the D.S.I.R. for the employment of a Membership Campaign Secretary. Miss D. M. Bremner was appointed and joined the staff on 4 December.

4. A substantial sum, as recorded in Section B of this report, was also authorized for the preparation of the varied publicity literature needed for the 1951 membership campaign.

5. Many members gave valuable assistance when they were invited, in November, to send the Director the names of persons or organizations whom they considered to be potential members of Aslib. No less than 162 names were submitted.

Section D—Conferences and Meetings

1. The Annual Conference was held at the University of Bristol during the week-end 22–25 September, when some 230 delegates were welcomed by Sir Philip Morris, Vice-Chancellor of the University of Bristol. A full report, with the papers presented, appeared in *Aslib Proceedings*, Vol. 2, No. 4, published in November.

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* These figures include 100 Government Departments which are not 'members' of Aslib in the strict sense of the term.

2. Plans have been made for holding the 1951 Annual Conference at Ashorne Hill, near Leamington Spa, 5–8 October, 1951, and details will be circulated later.

3. The Annual General Meeting was held in London on 26 April. After formal business, over 100 members were entertained to tea by Council and the presentation ceremony to Miss Ditmas, which is mentioned later in this report, took place.

4. Under the 1949–50 London winter meetings programme, the following meetings were held in 1950 :—

6 January	'Forms of Questionnaires; the effect of drafting and the results obtained', by Mr. Robert E. Silvey, of B.B.C. Listener Research, and Mr. D. L. Lamberth, of C.O.I (Social Survey).
1, 2 and 3 February	Visits to the Intelligence Division of Headquarters of the Department of Scientific and Industrial Research.
8 March	'The British National Bibliography', by Mr. F. C. Francis, British Museum.
	'H.M. Stationery Office publications and card index', by Mr. T. C. D. Evans, of H.M.S.O.

Reports of two of these meetings appeared in *Aslib Proceedings*, Vol. 2, No. 3.

Under the 1950–51 programme the following three meetings were held towards the end of 1950:—

26 October	'Symposium on Library Planning and Library Buildings', by Dr. W. Bonser (University of Birmingham), Mr. J. B. Reed (B.C.U.R.A.), Miss Mary Harvey—for Miss Jeannette Taylor (Medical Research Council), Mr. Vernon Rees and Mr. Maxwell Ayrton.
24 November	'Estimating the cost and value of Information Services', by Mr. J. B. Pears, I.C.I. Head Office, and Mr. C. W. Hanson, B.S.I.R.A.
15 December	'The Unesco Conference on the Improvement of Bibliographical Services, held in Paris, 7–10 November, 1950', by Mr. F. C. Francis (British Museum), and Mr. G. Woledge (British Library of Political and Economic Science).

Reports of the papers and discussions which followed will appear in *Aslib Proceedings*.

5. Meetings arranged by the Northern and Scottish Branches of Aslib are recorded in Sections H and I of this report.

6. In March the Conference and Meetings Committee set up a Working Party under the Chairmanship of Miss Barbara Kyle, 'to consider and report on such parts of the Unesco-Library of Congress Report on Bibliographical Services as are concerned with the Social

ith a view to discovering and making known the existing hical services in that field'. The list of British and Common- sources of information on publications in the social sciences, up by the working party, may be obtained from Aslib. The king party consisted of Miss Barbara Kyle (Chairman), Mr. T. sterman, Miss F. M. Birkett, Mr. B. Cheeseman, Miss P. M. Downie, Mr. H. Drake, Miss J. Harries, Mr. H. S. Hyland, Mr. W. Pearson, Mr. G. O. Randle. Aslib was represented at a meeting, held on 12 July, of British organizations interested in the Unesco-Library of Congress Report. The report adopted by this meeting formed part of the working papers for an international conference on 'Bibliographical Planning' held at Unesco House, Paris, 7–10 November, 1950, at which Mr. G. Woledge, Honorary Secretary of Aslib, was one of the two official representatives of the United Kingdom.

Section E—Education

1. The Study Group for newcomers to work in special libraries and information departments, which has been a feature of Aslib's activities for a number of years, was held at Chaucer House, by courtesy of the Library Association, from 15–20 May, and 69 students enrolled. The following lectures were given, and were followed by discussion sessions in each case :—

'A survey of British Libraries,
indicating sources of reference.'—Mr. H. S. Hyland
'Special Library loan systems and
circulation techniques—external.'—Mr. C. E. C. Hewetson.
'Special Library loan systems and
circulation techniques—internal.'—Mr. B. H. Chibnall.
'Special library enquiry techniques.'—Mr. C. W. Hanson.
'Problems of unorthodox classification.'—Miss R. M. Jacobs.

The thanks of the Association are due to the 23 libraries which generously admitted parties of students attending the Study Group.

A similar study group has been planned for 1951.

2. In the autumn, the Education Committee started enquiries into the provision of text-books on information work, the qualifications desirable in information officers, and the training of undergraduates and technical college students in literature searching. Its examination of these problems is still being pursued.

Section F—Information Bureau and Library

1. Statistical comparisons with the work of this department in 1949 are not easy, since the previous annual report covered a period of 18 months because of the change in the Association's financial year. Statistics were also grouped last year whereas the present report aims to show

analytically each of the department's principal routine acti following table shows, therefore, only the 1950 figures:—

Services	1950
Postal enquiries received	868
Telephone enquiries received	1,310
Personal enquirers	138
No. of names on translator's panel ..	126
Requests for translators	94
Periodicals regularly received	100
Books accessioned	271
Pamphlets accessioned	228
Loans from the Library	718
Inter-library loans negotiated	475

It is worth recalling that, in the 18 months covered by the previous report, enquiries of all kinds numbered 4,162, there were 146 requests for the services of translators, 577 books and pamphlets were accessioned and 722 loans made from the Aslib collection. If these figures are reduced to an annual average it will be seen that, while the number of enquiries fell by about 18 per cent in 1950 and requests for translators' services remained fairly stable, library accessions increased by about 30 per cent and loans from the library by just over 50 per cent.

2. The most important new step in relation to the Information Bureau was the decision to establish a central index to scientific and technical translations held in the principal countries of the Commonwealth. This scheme was the subject of a recommendation made at the Royal Society's Scientific Information Conference in 1948,, but until now lack of funds had made it impossible of achievement. For the first three years the index will be run under contract to the D.S.I.R.

3. The establishment of a comprehensive index to university theses in the United Kingdom was also considered at length by a joint Aslib-Library Association Committee, but no decision had been reached by the end of the year.

4. One of the many immediate tasks facing the Director on his appointment was to overhaul the document reproduction service which had both run at a heavy loss and accumulated large arrears of work. The service was drastically reorganized, and new scales of charges

introduced on 1 June. The service is now running smoothly and there are no accumulated arrears, though it seems unlikely that it can show a profit so long as the making of microfilms has to be placed in the hands of an outside agency. Reliable figures for the first part of the year are not available but, from June to December, 1,129 requisition forms were sold at 2*s.* 6*d.* each and 603 orders were received. Some use has been made of the Copycat machine installed in the Aslib premises.

5. As a result of an enquiry carried out in the autumn, it was possible to submit to both the Director of the Science Museum and the Chairman of the Standing Scientific Library and Technical Information Committee useful information concerning latent demands upon the Science Museum Library's loan service. The Director of the Science Museum has now considered this information, which indicated a desire among borrowers to see the installation of a telephone-enquiry service at the Science Museum Library and the return to circulation of its evacuated stocks, as well as a return to a rapid loan service. The results of the enquiry and the comments of the Keeper of the Science Library are published in *Aslib Information* for February, 1951.

6. Representations were also made to the Standing Scientific Library and Technical Information Committee on a matter raised in a report drawn up by the Technical Information Services Panel presided over by Dr. Alexander King. These were to the effect that the National Central Library, once its war damage repairs were made good, should be assisted in fulfilling its function by a generous Treasury grant to bring its union catalogues up to date.

7. In the Aslib Library itself, new shelving and other items of equipment have been installed. These were purchased with a special grant from the Treasury. The library occupies what is undoubtedly the finest room in the office premises, and both floor space and lighting arrangements will facilitate planning towards the ideal of a really comprehensive collection on special librarianship.

Section G—Publications

1. A firm schedule of publication dates for periodical publications was laid down in April to facilitate production, distribution and sales of advertisement space, and to counter the dislocation caused by removal to new premises. They are :—

Aslib Information	15th of each month.
Aslib Book List	15th of each month.
Aslib Proceedings	15 February, 15 May, 15 August, 15 November.
Journal of Documentation	15 March, 15 June, 15 September, 15 December.

In spite of subsequent strikes in the printing industry, the first three periodicals were appearing on schedule by the end of the year. In the case of the *Journal of Documentation*, which depends entirely on articles written by voluntary contributors, regularity of publication has been less easy to achieve. The editorial board is, however, doing its utmost to remedy the situation.

As will be seen from the annual accounts, revenue from sales of advertisement space was disappointing, but steps have been taken which, it is hoped, will show an improvement in 1951. It does appear, nevertheless, that advertisers have been spending progressively less on routine advertising.

2. Following suggestions made at the Bristol conference, the Publications and Editorial Committee examined proposals for a new Aslib periodical, open to contributed articles unlike *Aslib Proceedings*, but possibly less highbrow than the *Journal of Documentation*. The practical solution was felt to lie in an expansion of *Aslib Proceedings*, and it is now hoped to include in this quarterly short contributed articles, notes, letters to the editor, and similar features.

3. Means of improving and expanding the monthly *Aslib Book List* have also been carefully examined and its panel of contributors revised and enlarged. Mr. D. V. Arnold had unfortunately to resign as Honorary Editor because of other commitments, but Mrs. A. M. Whitrow nobly took over. The new British Standard for bibliographical references has been adopted for the 1951 and subsequent issues. Though work could not begin at once, plans have been made for consolidating in one volume all issues of the *Aslib Book List* since its inception, and it is hoped to publish this in 1951.

4. The only new publication issued by Aslib in 1950, *The Cataloguing, Arrangement and Filing of Special Material in Special Libraries*, by Mr. R. L. Collison, was published on 25 September. A limited amount of advertising resulted in 571 of the 1,000 copies printed being sold by the end of the year, and today only a limited number remain in stock.

5. In November Mr. W. Ashworth was invited to edit the long-contemplated *Aslib Manual of Special Library Practice*, which, it is hoped, will become the standard work on the subject. He is to be assisted by an editorial board consisting of Mr. J. J. Graneek, Dr. V. E. Parke, Mr. G. Woledge and Mr. J. E. Wright.

6. Numerous demands for a new Aslib Directory, and difficulties in producing the *Aslib Guides to Sources of Information in Great Britain* quickly enough led to the creation in November of an *ad-hoc* sub-committee to consider the whole question anew. The sub-committee had little difficulty in agreeing upon a new Directory in two volumes, the first being a Directory of libraries and of institutions which have a library in the United Kingdom, and the second a Directory of other sources of specialised information in the United Kingdom. Under favourable circumstances, the first volume should be ready for publication early in 1952, possibly a little earlier.

7. A welcome development early in the year was an invitation from the Library Association asking Aslib to contribute the chapter on Special

Libraries in the annual *Year's Work in Librarianship.* This was gladly accepted, and Miss Ditmas agreed to undertake this yearly task.

Section H—Northern Branch

The Northern Branch, now in its fourth year, organized three meetings during the year :—

1. At the Harris Public Library, Art Gallery and Museum, Preston, on 16 June, papers were presented on 'Library facilities in Preston, particularly for the study of technology', by Mr. R. F. Watson, of the Harris Public Library, and on 'Small information services in an industrial undertaking', by Mr. A. H. Raine, of Messrs. Brotherton & Co., Ltd. Miss J. A. Downton, of the Harris Public Library, gave a short account of the work being done on the Alphabetical List of Periodicals in the North-West. The paper by Mr. Raine appears in *Aslib Proceedings*, Vol. 3, No. 1.

2. The Annual General Meeting of the Branch was held at the Manchester Central Library on 27 October. After lunch two papers, by W. H. Glasscock, Superintendent of H.M. Stationery Office, Manchester, and Mr. S. Horrocks, of the Manchester Central Library, were presented on the theme of Government and official publications. The text of both papers appears, in whole or in part, in *Aslib Proceedings*, Vol. 3, No. 1.

3. Facilities for the study of technology in Leeds formed the subject of the morning session of a Branch meeting held in the Civic Hall, Leeds, on 30 November. Mr. B. S. Page, the University Librarian, and Mr. E. Hargreave, of the City Libraries, spoke on the facilities provided by their respective libraries. In the afternoon, Mr. G. A. Shires, of the Dunlop Rubber Co., Ltd., presented a paper entitled 'Information services from first principles', and the Director spoke on Aslib's services to industry.

4. The Branch expressed its warm appreciation, at the Annual General Meeting, of the work of Mr. R. Brightman and Miss L. Wolff, the retiring Chairman and Honorary Secretary respectively, for their work in the formative years of the Branch.

5. The Branch has spent a most active year, particularly in its attempts to break new ground. Its membership numbered 200 in December. The names of Branch officers are included in Appendix I.

Section I—Scottish Branch

1. The Scottish Branch, founded in 1949, was dogged by ill-luck when its only meeting of the year, planned for 14 April, had to be postponed because of the smallpox epidemic in Glasgow. The postponed meeting took place on 6 October at the Mitchell Library, Glasgow, the opening address being given by Mr. C. A. Oakley, Regional Controller of the Board of Trade. Mr. James Fergusson, Keeper of the Records of Scotland, spoke on the Records of Scotland and Sir James French on 'Books in Industry'. Papers were also given on 'The Range of Government

Publications' by Mr. W. A. Beck, Superintendent for Scotland of H.M. Stationery Office, and on 'The attitude of the research worker to technical information', by Mr. S. Weinberg, of Messrs. G. & J. Weir, Ltd. The day's papers appear, in whole or in part, in *Aslib Proceedings*, Vol. 3, No. 1. The Branch Annual General Meeting followed the afternoon session.

2. Branch membership numbered 30 in December. The names of the Branch officers are included in Appendix I.

Section J—New Branches and Subject Groups

It has for long been apparent that the activities of provincial branches of Aslib form one of the best means of making Aslib known outside London. Council has, therefore, decided to encourage the formation of a small number of new branches where a demand for them exists among members. It will be realized that tangible results must be slow to mature but the Northern Branch has already pioneered in holding exploratory meetings outside its more usual centres. Council also hopes to see a steady development towards the formation of subject groups which will provide a focus for the discussion of problems common to particular fields, and also a means of carrying out small but useful co-operative projects. The first of these groups—concerned with economics, textiles and food and agriculture—are already being formed. As an encouragement to these two movements, Council has agreed to allocate a certain portion of the special grant sanctioned by the Treasury to help meet the formation expenses of both branches and groups.

Section K—Staff

1. On 1 March Miss E. M. R. Ditmas was succeeded as Director by Mr. Leslie Wilson, formerly Foreign Editor of *The Times Educational Supplement*. Miss Ditmas had served the Association faithfully for 16 years, and it was with deep regret that Council acceded to her request to be relieved of the increasing administrative duties of the office. With characteristic loyalty she undertook a part-time appointment in the office until the end of the year, and agreed to continue to help thereafter in an editorial capacity. In recognition of her long and distinguished service, a tooled leather desk blotter and a cheque for £150, together with a scrap-book of letters of appreciation from members, were presented to Miss Ditmas by the President, Dr. Dunsheath, at a presentation ceremony held after the Annual General Meeting on 26 April.

2. At the end of December the office staff numbered 15. A number of staff changes were made as part of the reorganization mentioned in Section A of this report, and a list of those employed at the end of 1950 is contained in Appendix II.

3. An important step in domestic affairs was the approval in November of a system of salary scales for implementation on 1 January, 1951. This will have the advantage not only of showing to each new member of staff what his financial prospects are, but also of enabling Council to judge its salary commitments several years ahead.

Section L—Relations with other Organizations

Aslib has continued to be actively associated with other bodies working in the library and information field, and the names of its representatives on other organisations in the United Kingdom appear in Appendix III. The most noteworthy event was the decision of the British National Committee on Documentation, taken in August, to dissolve at the end of the year. Its inability to meet its financial obligations as the British Section of the Fédération Internationale de Documentation had persistently dogged its progress, and dissolution appears to have been inevitable. At its penultimate meeting, the Committee expressed the hope that Aslib would itself take the initiative in convening a successor, constituted on somewhat different lines and aiming primarily at the co-ordination of documentation activities within the United Kingdom. This suggestion is now being considered by Council.

In the international field, happy and fruitful relations have been maintained with both foreign national and international bodies, particularly the Fédération Internationale de Documentation, the International Federation of Library Associations and Unesco. Some 70 delegates attending the International Library Committee in London were the guests of Council at a cocktail party on 15 September, and at various times in the year the Association acted as host to some half-dozen foreign students of special librarianship and eased the path of many more. Council looks forward to an extension of these activities in years to come.

Section M—Conclusion

The year has undoubtedly been a momentous one for Aslib from many points of view. It is perhaps not too strong to say that it has undergone a minor revolution. But, like most British revolutions, the shocks have been almost imperceptible and such changes as have been made have occurred with a minimum of upheaval and a maximum of careful and deliberate planning. Nevertheless, they have been substantial and they could not have been achieved without the greatest co-operation between members, their elected representatives, the hard-working committees and a loyal and responsive staff. The daily work of the Director and his staff, in particular, has been greatly increased by the new developments set in motion, and Council takes this opportunity of expressing publicly its warm appreciation of their services under difficult conditions. Even greater efforts by the whole Association will be necessary if the rapidly growing demands made upon Aslib are to be met, but Council has no doubts that, through continued co-operation of the kind shown in 1950, they will be efficiently met.

Signed for and on behalf of Council,

H. HYAMS,

March, 1951 *Chairman.*

APPENDIX I

HONORARY OFFICERS—

President:	Percy Dunsheath, C.B.E., M.A., D.Sc., M.I.E.E.
Vice-Presidents:	Sir John Forsdyke, K.C.B., M.A., F.S.A., A.R.I.B.A.
	Professor R. S. Hutton, M.A., D.Sc.
	Sir Harry Lindsay, K.C.I.E., C.B.E.
	Sir Henry Tizard, G.C.B., A.F.C., D.C.L., LL.D., F.R.S., F.Inst.P., F.R.Ae.S.
Honorary Treasurer:	J. E. Wright.
Honorary Secretary:	G. Woledge, B.A., A.L.A.

COUNCIL—

H. Hyams, F.Inst.Pet. (*Chairman*).
V. E. Parke, M.A., D.Sc. (*Deputy Chairman*).
D. V. Arnold, B.Sc., F.L.A.
W. Ashworth, B.Sc., F.L.A., A.R.P.S.
W. Bonser, B.A., Ph.D., F.L.A., F.R.A.I.
R. Brightman, M.Sc., F.P.I.C., A.C.G.F.C.
R. L. W. Collison, F.L.A.
A. E. Cummins.
J. J. Eaton.
Miss M. Exley, F.L.A.
A. B. Agard Evans, M.Sc., A.R.I.C.
G. Ellis Flack, M.A., A.L.A.
B. Fullman, B.Sc., F.R.I.C., F.I.M.
Miss M. Gosset, A.R.C.S., B.Sc.
L. M. Harrod, F.L.A.
T. M. Herbert, M.A., M.I.Mech.E.
R. H. Hill, M.A., F.L.A.
F. L. Kent, M.A.
Miss Barbara Kyle.
J. P. Lamb, Hon.M.A., F.L.A.
Mrs. J. Lancaster Jones, B.Sc.
C. le Maistre, C.B.E., F.C.G.I., M.I.E.E., M.Am.I.E.E., Ass.M.Inst.C.E.
E. R. McColvin, A.L.A.
O. W. Pendleton, M.A., F.L.A.
A. H. Raine, B.Sc.

R. S. Schultze, Dr.Ing., A.R.P.S.
Miss I. Shrigley, M.A.
J. F. Stanley, B.Sc., A.C.G.I., M.I.E.E.
Miss L. G. Thomerson, B.Sc.
H. J. Watling.
D. G. Brown, B.Sc., Ph.D., A.R.I.C. (Co-opted).
F. C. Francis, M.A., F.S.A. (Co-opted).
H. G. Thornton (appointed by D.S.I.R. under Article 20).
The Honorary Officers.

EXECUTIVE AND FINANCE COMMITTEE :

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V. E. Parke, M.A., D.Sc. (*Deputy Chairman*).
Chairmen of the Four Standing Committees
or their deputies.
The Honorary Treasurer.
The Honorary Secretary.
A. B. Agard Evans, M.Sc., A.R.I.C.
B. Fullman, B.Sc., F.R.I.C., F.I.M.
J. F. Stanley, B.Sc., A.C.G.I., M.I.E.E.

CONFERENCES AND MEETINGS COMMITTEE :

Miss Barbara Kyle (*Chairman*).
Mrs. J. Lancaster-Jones, B.Sc. (*Deputy Chairman*).
W. Ashworth, B.Sc., F.L.A., A.R.P.S.
Miss F. M. Birkett, M.A., F.L.A.
R. Brightman, M.Sc., F.P.I.C., A.C.G.F.C.
D. G. Brown, B.Sc., Ph.D., A.R.I.C.
Miss M. Couldrey, B.A.
Miss M. Exley, F.L.A.
C. E. C. Hewetson,
F. L. Kent, M.A.

WINTER MEETINGS SUB-COMMITTEE :

Mrs. J. Lancaster-Jones, B.Sc. (*Chairman*).
Miss F. M. Birkett, M.A., F.L.A.
Miss M. Couldrey, B.A.
Miss D. E. Dovell.
C. W. Hanson, B.Sc.
C. E. C. Hewetson.
Miss R. M. Jacobs, B.A., B.S. in L.S.
Miss Barbara Kyle.

EDUCATION COMMITTEE :

V. E. Parke, M.A., D.Sc. (*Chairman*).
A. E. Cummins (*Deputy Chairman* until 20 November, 1950).
D. V. Arnold, B.Sc., F.L.A. (*Deputy Chairman* after 20 November, 1950).
A. B. Agard Evans, M.Sc., A.R.I.C.

C. W. Hanson, B.Sc.
Miss R. M. Jacobs, B.A., B.S. in L.S.
F. L. Kent, M.A.
Mrs. J. Lancaster-Jones, B.Sc.
E. R. McColvin, A.L.A.
L. G. Patrick, F.L.A.
R. Stokes, D.L.C., F.L.A.

INFORMATION AND LIBRARY COMMITTEE :

F. L. Kent, M.A. (*Chairman* until 4 December, 1950).
R. L. W. Collison, F.L.A. (*Deputy Chairman* until 4 December, 1950, and thereafter *Chairman*).
R. H. Hill, M.A., F.L.A. (*Deputy Chairman* after 4 December, 1950).
W. Ashworth, B.Sc., F.L.A., A.R.P.S.
Miss M. Gosset, A.R.C.S., B.Sc.
J. P. Lamb, Hon.M.A., F.L.A.
Miss S. R. Neuberger, B.A.
P. Record, M.A., F.L.A.
D. J. Urquhart, B.Sc., Ph.D.
Miss K. E. Watkins, B.Sc., F.L.A.
H. J. Watling.

PUBLICATIONS COMMITTEE :

R. S. Schultze, Dr.Ing., A.R.P.S. (*Chairman*).
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B. M. Crowther, Ph.D., M.A., F.Inst.P.
J. J. Eaton.
B. Fullman, B.Sc., F.R.I.C., F.I.M.
L. M. Harrod, F.L.A.
W. R. Le Fanu, M.A.
E. R. McColvin, A.L.A.
Miss L. G. Thomerson, B.Sc.
Mrs. A. M. Whitrow, B.A., A.L.A.
G. Woledge, B.A., A.L.A.

EDITORIAL BOARD, 'JOURNAL OF DOCUMENTATION' :

G. Woledge, B.A., A.L.A. (*Chairman*).
Miss E. M. R. Ditmas, M.A.
F. C. Francis, M.A., F.S.A.
D. J. Urquhart, B.Sc., Ph.D.

NORTHERN BRANCH OFFICERS :

E. N. Simons (*Chairman*).
A. H. Raine (*Vice-Chairman*).
J. C. Withers (*Honorary Treasurer*).
Miss E. Boddy (*Honorary Secretary*).
G. E. Haslam (*Honorary Auditor*).

Committee :

L. L. Ardern, A. R. Cameron, G. H. Davison, Mrs. M. Dean, Miss M. Exley, J. P. Lamb, Miss Miller, L. J. B. Mote, V. E. Parke, A. H. Raine, W. Roman, F. A. Sharr and Miss E. Vallender.

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M. C. Pottinger (*Vice-Chairman*).
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Mrs. M. Spence (*Honorary Secretary*).
Miss E. Handlen (*Honorary Assistant Secretary*).

Committee :

R. Butchart, R. J. Cruikshank, W. M. Dickie, W. G. Marskell, A. B. Paterson, J. Revie, L. W. Sharp, P. W. Thomas.

APPENDIX II

STAFF AT 31 DECEMBER, 1950 :

Mr. Leslie Wilson, M.A. (*Director*).

Mr. J. Bird, B.A. (*Librarian*).
Miss D. M. Bremner (*Membership Campaign Secretary*).
Miss E. M. R. Ditmas, M.A. (*Special Part-time Appointment*).
Mr. C. W. Fleet (*Publications Officer*).
*Mrs. M. E. Mackiewicz, A.L.A. (*Information Officer*).
Miss F. A. Turnbull (*P.A. to the Director*).

Miss A. M. Carne.
Mrs. M. C. Curtis.
Miss L. Deane.
Miss B. Ford.
Miss T. Gibbens.
Miss M. R. Harley.
Mrs. R. A. G. Lovett.
Miss J. B. Mason.

Mr. D. Grenfell and Mrs. R. L. Sauvée left the Aslib staff in December.

* Joined on 8 January, 1951.

APPENDIX III

ASLIB REPRESENTATIVES ON OTHER ORGANIZATIONS IN THE UNITED KINGDOM :

Standing Scientific Library and Technical Information Committee	Mr. B. Fullman.

National Co-operating Body for Libraries (Unesco)	The Director.
Council of British National Bibliography	The Director.
National Central Library	Mrs. J. Lancaster-Jones.
Librarianship Sub-Committee of the London Regional Advisory Council for Higher Technological Education	The Director.
British Union Catalogue of Periodicals	Dr. W. Bonser, Prof. R. S. Hutton, Mr. F. L. Kent, Mrs. J. Lancaster-Jones.
Scottish Central Library for Students	Dr. D. G. Brown.
National Book League	The Director.
National Committee on Building Documentation	The Director.
Institute of Recorded Sound	Mr. J. J. Eaton.
B.S.I. Documentation Standards Committee (OC/20)	Miss E. M. R. Ditmas, Mr. T. M. Herbert, Mr. C. Le Maistre, Mr. R. A. Fairthorne.
B.S.I. Sub-Committee on the U.D.C. (OC/20/4)	Miss M. Couldrey, Miss E. M. R. Ditmas, Miss M. Gosset, Mrs. J. Lancaster-Jones.
B.S.I. Sub-Committee on Documentary Reproduction (OC/20/7)	Miss E. M. R. Ditmas.
B.S.I. Sub-Committee on abbreviation of titles of periodicals (OC/20/8)	Dr. R. S. Schultze.
B.S.I. Sub-Committee on transliteration of Cyrillic characters (OC/20/9)	Mr. D. Grenfell (until 7 December, 1950).
British National Committee on Documentation	The Hon. Secretary, Mr. J. F. Stanley, The Director, Miss E. M. R. Ditmas, Mr. C. Le Maistre, Mr. R. A. Fairthorne.

ASLIB

BALANCE SHEET AND ACCOUNTS

31 December 1950

BALANCE SHEET 31st DECEMBER, 1950

1949 £	1949 £		£	£
		CAPITAL GRANTS FROM DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH :		
	1,159	For Furniture and Equipment		2,410
		INCOME AND EXPENDITURE ACCOUNT :		
	662	Balance at this date		1,548
		CURRENT LIABILITIES :		
1,023		Midland Bank Ltd. Overdraft	391	
963		Printing of Publications	888	
58		Royalties on Publication Sales	103	
714		Expenses accrued due	338	
178		Subscriptions received in advance	66	
	2,936			1,786
	£4,757			£5,744

1949 £	1949 £		£	£
		FURNITURE, FITTINGS AND EQUIPMENT :		
		At cost as at 31st December, 1949	1,253	
	1,253	Additions during the year	1,261	
				2,514
		CURRENT ASSETS :		
928		Stock of Publications	1,038	
70		(*Work in Progress Documentary Reproduction*)	—	
561		Debtors for Publications and Services	476	
486		Subscriptions in arrear . . .	371	
1,386		D.S.I.R. Grant receivable . ..	1,169	
59		Sundry Debtors and payments in advance .	119	
14		Cash in hand	57	
	3,504			3,230
	£4,757			£5,744

J. E. WRIGHT, *Hon. Treasurer.*
G. WOLEDGE, *Hon. Secretary.*

REPORT OF THE AUDITORS TO THE MEMBERS OF ASLIB

We have audited the above Balance Sheet and annexed Income and Expenditure Account and have obtained all the information and explanations which to the best of our knowledge and belief were necessary for that purpose. So far as appears from our examination, proper books of account have been kept by the Association. In our opinion and to the best of our information and according to the explanations given to us, the Balance Sheet and Income and Expenditure Account which are in agreement with the books of account, give the information required by the Companies Act 1948, in the manner so required and also a true and fair view of the state of the Association's affairs as at 31st December, 1950, and of the surplus for the year to that date.

SARDINIA HOUSE, 52 LINCOLN'S INN FIELDS, LONDON, W.C.2
th March, 1951.

WEST AND DRAKE,
Chartered Accountants.

APPROPRIATION ACCOUNT YEAR ENDED 31st DECEMBER, 1950

1949 £		£	£
133	(*Formation Expenses*)		—
	Removal and Decorating Expenses .. .	359	
—	*Less* Grant from D.S.I.R.	359	
			—
662	BALANCE AS AT 31ST DECEMBER, 1950, carried forward		1,548
£795			£1,548

1949 £		£
—	BALANCE AS AT 31ST DECEMBER, 1949 brought forward	662
—	Excess of Assets over Liabilities taken over from British Society for International Bibliography	91
795	EXCESS OF INCOME OVER EXPENDITURE FOR YEAR TO 31ST DECEMBER, 1950	795
£795		£1,548

GENERAL INCOME AND EXPENDITURE ACCOUNT YEAR ENDED 31st DECEMBER, 1950

1949 £	£			£	£
1,958		SALARIES · Administration		1,847	
347		Membership		339	
	2,305				2,186
		RENT AND GENERAL OFFICE EXPENSES:			
364		Rent and Excess Rates		1,097	
70		Light and Heat		48	
386		Printing and Stationery		436	
503		Postages and Telephone		643	
35		Travelling Expenses		104	
241		Office Expenses		547	
11		Insurance		13	
92		Bank Charges and Interest		52	
—		Professional Charges		114	
52		Audit Fee		63	
1,754				3,117	
		Less charged to Special Departments:			
262		Publications (15%)	467		
262		Documentary Reproduction (15%)	467		
349		Library and Information (20%)	622		
87		Conference and Lectures (5%)	156		
	794			1,712	1,405
	3099				3,591
	1,476	COST OF FREE COPIES TO MEMBERS			2,111
	350	WORK CARRIED OUT ON BEHALF OF THE BRITISH COUNCIL			350
124		EXPENSES OF MEMBERSHIP DRIVE		56	
124		*Less* Grant receivable from D.S.I.R.		56	—
	25	*(Grants to ASLIB Branches)*			—
		NET COST OF SPECIAL DEPARTMENTS:			
651		*(Surplus)* Deficit on Publications		127	
695		*(Deficit)* „ „ Documentary Reproduction		635	
1,744		„ „ „ Library and Information		1,576	
104		„ „ „ Conference and Lectures		63	
	1,892				2,401
	795	EXCESS OF INCOME OVER EXPENDITURE carried to Appropriation Account			795
	£7,637				£9,248

1949 £	£		£	£
		MEMBERSHIP SUBSCRIPTIONS:		
3,603		British	4,015	
659		Foreign	858	
	4,262			4,873
		GRANTS AND CHARGES FOR SERVICES:		
3,000		Department of Scientific and Industrial Research	4,000	
350		The British Council	350	
25		British Union Catalogue of Periodicals	25	
	3,375			4,375
	£7,637			£9,248

INCOME AND EXPENDITURE ACCOUNTS — YEAR ENDED 31st DECEMBER, 1950

PUBLICATIONS

1949 £	1949 £		£	£
	360	Stocks on Hand at 31st December, 1949		928
		Publication Expenses (including Editor's Salary):		
678		General Literature	336	
522		Book List	525	
837		Journal of Documentation	828	
278		Bulletin	299	
452		Proceedings	1,035	
	2,767			3,023
	—	Advertising—General Literature		9
244		Salaries	693	
262		Rent and General Expenses	467	
	506			1,160
	651	(*Excess of Income over Expenditure*)		—
	£4,284			£5,120

1949 £	1949 £		£	£
		COST OF FREE COPIES TO MEMBERS:		
299		Book List	402	
513		Journal of Documentation	615	
316		Bulletin	401	
348		Proceedings	693	
	1,476			2,111
		SALES:		
698		General Literature	605	
370		Book List	311	
477		Journal of Documentation	477	
—		Bulletin	—	
112		Proceedings	223	
	1,657			1,616
	222	Advertisements in Publications		228
	929	Stocks on Hand at 31st December, 1950		1,038
	—	EXCESS OF EXPENDITURE OVER INCOME met out of General Income		127
	£4,284			£5,120

DOCUMENTARY REPRODUCTION SERVICE

1949 £		£
207	Work in Progress at 31st December, 1949	70
249	Reproduction Costs	327
566	Salaries	576
262	Rent and General Expenses	467
£1,284		£1,440

1949 £		£
519	SALES	805
70	(*Work in Progress at 31st December, 1949*)	—
695	EXCESS OF EXPENDITURE OVER INCOME met out of General Income	635
£1,284		£1,440

LIBRARY AND INFORMATION

1949 £		£
1,337	Salaries—Information Department	939
66	Reference Books	280
349	Rent and General Expenses	622
£1,752		£1,841

1949 £		£
—	Grant Receivable from D.S.I.R. for Reference Books	246
8	Fees received—Translation and Advice	19
1,744	EXCESS OF EXPENDITURE OVER INCOME met out of General Income	1,576
£1,752		£1,841

CONFERENCE (1950) AND LECTURES

1,172	Conference and Lecture Expenses	904	*1,383*	Fees received	1,259
228	Salaries	262		EXCESS OF EXPENDITURE OVER INCOME	
87	Rent and General Expenses	156	*104*	met out of General Income	63
£1,487		£1,322	*£1,487*		£1,322

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LONDON MEETINGS, OCTOBER, 1948–MARCH, 1949

CONTENTS

PAGE

PREFACE 1

Wednesday, 27th October, 1948

STANDARDIZATION IN DOCUMENTATION.
Miss E. M. R. Ditmas (Aslib), G. A. Lloyd (British Standards Institution), F. L. Kent (Librarian, University of Bristol) *Reported* . . 2

Wednesday, 17th November, 1948

SYMPOSIUM ON CLASSIFICATION.
1. THE BIBLIOGRAPHIC SYSTEM OF CLASSIFICATION.
L. A Burgess (Deputy Librarian, Southampton Public Libraries) *Abridged* 7
2. THE COLON CLASSIFICATION.
A. J. Wells (*Acton Public Library*) 14

Wednesday, 15th December, 1948

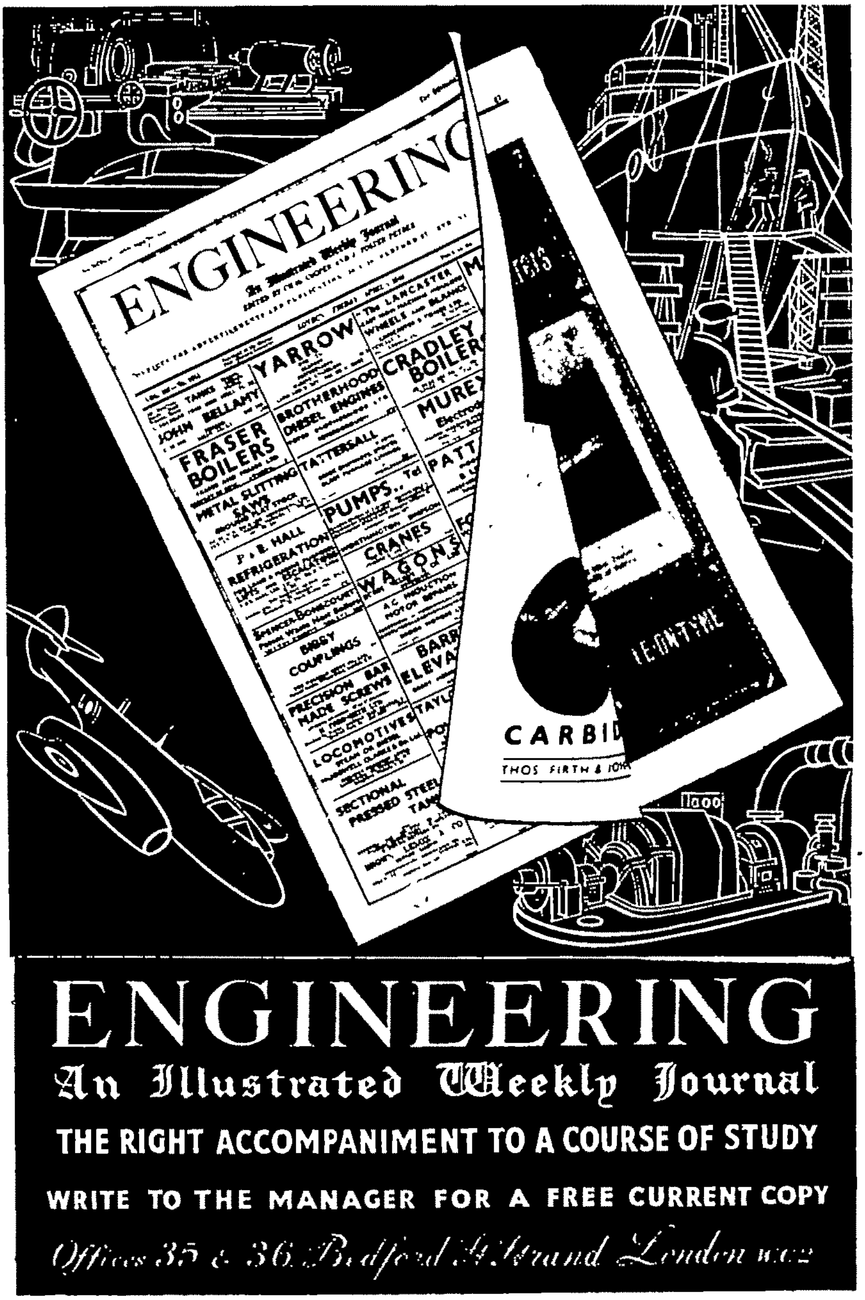
INFORMATION FROM THE ADVERTISEMENT PAGES.
Geoffrey A. Shires (Dunlop Rubber Co. Ltd.) 23
REARRANGEMENT AND RECATALOGUING OF A LIBRARY OF BOOKS.
J E. Wright (Institution of Electrical Engineers) 26

Wednesday, 16th February, 1949

SYMPOSIUM ON MICROPHOTOGRAPHY FROM THE USER'S POINT OF VIEW.
Miss E. M R. Ditmas (Aslib), H. E. Wilson (Royal Society of Medicine Photographic Unit), Mrs. L. Moholy, H. R. Verry (H.M. Treasury O. & M Division) *Reported* 33
NOTES ON MICROFILM READERS.
Miss E. M. R. Ditmas (as an appendix to the Symposium on Microphotography) 37

Wednesday, 23rd March, 1949

SYMPOSIUM ON METHODS OF GROUPING SPECIALIST LIBRARY SERVICES.
1. SERVICE TO MEDICAL LIBRARIES
Geoffrey R. Edwards (Royal Society of Medicine) *Reported* . . . 39
2. THE INTERCHANGE OF TECHNICAL PUBLICATIONS IN SHEFFIELD.
J. P. Lamb (Sheffield City Libraries) 41



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ASLIB PROCEEDINGS

Volume 2 February, 1950 Number 1

PREFACE

THIS issue of *Aslib Proceedings* contains papers and reports of contributions to the five winter meetings organized by Aslib in London between October, 1948, and March, 1949, in continuation of the practice of the British Society for International Bibliography before its amalgamation with Aslib in January, 1948. By courtesy of the Institution of Electrical Engineers the meetings were held, as formerly, in their lecture hall.

Owing to limitations of space it has not, unfortunately, been possible to report the discussions which followed the papers, but the thanks of Aslib are due to all who took part and who thus contributed to the success of the meetings.

STANDARDIZATION IN DOCUMENTATION

London Meeting, 27th October, 1948

(Reported)

THE first meeting of the 1948/49 session of Aslib winter meetings was devoted to a discussion of various aspects of standardization in documentation. Mr. F. C. Francis, of the British Museum, took the chair, and in his opening speech referred to the growing importance of the subjects covered by the term 'documentation' as shown by the many references made to them during the Scientific Information Conference held by the Royal Society in June and July, 1948.

The first contribution to the discussion was made by Miss E. M. R. Ditmas, Director of Aslib, who reminded those present of the various organizations interested in the standardization of documentation. Of these, three were at the international level, e.g. I.S.O., F.I.D. and I.F.L.A. The first of these was the International Organization for Standardization (formerly the International Standards Association), section 46 of which was specifically concerned with standards in documentation. The Secretariat for I.S.O. 46 was situated at the Nederlandsche Instituut voor Documentatie en Registratuur at The Hague and at meetings convened by it in August, 1948, the standardizing of such matters as the layout of periodicals, the abbreviations of titles of periodicals, the transliteration of Cyrillic characters and the dimensions of microfilm had been under discussion.

The International Federation for Documentation (F.I.D.) had long been interested in standardization in certain fields of documentation. In many countries, as in Great Britain, the closest possible liaison was maintained between the national committees of I.S.O. 46 and of the F.I.D.

The International Federation of Library Associations (I.F.L.A.) was the third of the international bodies concerned with standardization in this field, particularly in such matters as alphabetical arrangement, bibliographical references, etc.

In Great Britain the organization responsible for co-ordinating work on standardization, in documentation as in other subjects, was the British Standards Institution (B.S.I.) and it had set up a special committee, on which the Library Association, Aslib, and other interested bodies were represented, which acted as the British national committee of I.S.O. 46. The composition of this committee was almost identical with that of the British National Committee on Documentation which acted as the British national committee of the F I.D. The following list of the sub-committees of the B.S.I. Documentation Standards Committee shows the scope of work on standardization in documentation which has been organized in Great Britain :—

1. Bibliographical references (B.S. 1629, 1950).
2. Alphabetical arrangement.

3. Book sizes (B.S. 1413, 1947).
4. Universal Decimal Classification (responsible for the English editions of the U.D.C.).
5. Storage of microfilms (B.S. 1153, 1944).
6. Codes of symbols for printers' and authors' corrections (B.S. 1219, 1945).
7. Documentary reproduction.
8. Abbreviations of titles of periodicals.
9. Transliteration of Cyrillic characters.

Miss Ditmas went on to describe in some detail the proceedings at the meetings of I.S.O. 46 at The Hague in August, 1948, when an overcrowded time-table and language difficulties complicated the work of the delegates. Turning to some of the practical aspects of standardization in documentation, she pointed out that the increase in the use of document reproduction had some effect on such matters as the layout of periodicals. It was, for instance, now desirable that the title and date of the periodical should appear on either or both the recto and verso pages so that a photograph copy of any article should show unmistakably the date and the journal in which it originally appeared. She felt that points such as these would be most readily remembered by librarians or other users of the proposed standards and pleaded that in the composition of committees set up to compile standards in documentation librarians and other users should be included as well as experts in the technique of standardization.

Miss Ditmas was followed by Mr. G. A. Lloyd, of the British Standards Institution, who pointed out that standardization did not imply any restriction on the librarian or information officer. Standardization was meant to assist these executives in a job which demanded a high degree of initiative. Speaking as an individual and not as an officer of the British Standards Institution, he listed the following requirements of a good standard :—

1. *It must be widely agreed.* How widely British Standards were agreed was a matter for discussion.

2. *It must represent the ideas of both producer and user.* The British Standards Institution committees on documentation were not, he thought, as representative as could be desired of the librarian's point of view. The B.S.I. wanted to hear from the users and, as Miss Ditmas had suggested, he thought that it might be advantageous to appoint more library representatives.

3. *It should fulfil a definite and recognized need.* Nobody, for instance, would want to standardize the colour of railway sleepers, but a standard track gauge had obvious advantages. When he joined the B.S.I. the use of 'z' in any confusion of 's' and 'z' was recommended, but there was no point in making this a standard.

4. *It must be revised in a reasonable manner to keep up to date.* Continuous drastic revision, however, defeated the object of standardization.

5. *It must not conflict with any other standard.* If there were conflict the standards would be ineffective. In the same way, if the size of the finished article was dependent on the form in which the raw material was supplied, it would be useless to standardize the one without standardizing the other.

Mr. F. L. Kent, Librarian of Bristol University Library, was the third speaker. It might be helpful, he said, if he gave briefly the history of one particular attempt in this field—namely, the attempt to standardize abbreviations for titles of periodicals.

The pioneer in this work was the *World List of Scientific Periodicals*, which, in its first edition (1925–27), set forth briefly a code of rules. In the preface to that edition appeared the words 'titles of periodicals have been abridged on a plan which it is hoped will enable users (of the list) to reconstruct all of any reasonable length'.

A more elaborate code of rules was devised for working purposes than that which appeared in brief in the volume itself, and these rules were first set down in detail in a publication of international scope in the German *Vornorm*, No. 1502 (July, 1928), which formed the basis of discussion by a committee of librarians under the ægis of the International Institute of Intellectual Co-operation in Paris. The result of this discussion was the *Code International d'abréviations des titres de périodiques* (German *D.I.N.* 1502 *Zeitschriftenkurztitel*; Dutch *N* 782 *Tijdschriften, Titelafkortingen*).

In its second edition (1934) the *World List* adopted the International Code, changing its own original rules of 1927 where necessary. It was indeed most gratifying to the *World List* to find that an international need had been foreseen no fewer than nine years before and had been met at that time by a code of rules in which subsequent international discussion had produced so few changes of importance. It may be noted in passing that the great *Union List of Serials* (Gregory) never attempted abbreviations.

The next step was the taking over by I.S.A. (now I.S.O.) from the International Institute of Intellectual Co-operation of this—among other—documentary standardization activities. In September, 1938, I.S.A. Committee Number 46 (Documentation), consisting of representatives of the Standards Associations of Denmark, France, Germany, Great Britain, Italy, Netherlands, Switzerland, U.S.A. and U.S.S.R., met in London and accepted the *Code International* almost in its entirety. It was, however, necessary for the sake of clarity to re-draft the actual rules; these were published in *I.S.A. Bulletin* 23, which remained the definitive text until this year.

Having done some work for the second edition of the *World List*, and having in 1947 been appointed one of the two co-editors of the third edition, Mr. Kent was asked to represent the *World List* on a Sub-committee of the British Standards Institution which began to consider the subject of abbreviations in April of this year (1948). Terms of reference were to review *I.S.A. Bulletin* 23 and to prepare comments for submission to I.S.O. Committee 46 at its meeting at The Hague in June.

Mr. Kent subsequently became Chairman of the B.S.I. Sub-committee and represented it and the *World List* at The Hague.

The difficulties of The Hague Conference and of its complicated timetable, Mr. Kent continued, had already been described. It proved impossible either to find many delegates who could serve on the special Sub-committee which I.S.O. 46 appointed to consider abbreviations, or to find much time in which that Sub-committee could meet. Five delegates, however, did succeed in gathering together (mostly in the evenings) and in considering the comments on *I.S.A. Bulletin* 23 submitted by Denmark, Great Britain and Sweden (the only countries which submitted comments). The five delegates represented Denmark, Great Britain, India, Netherlands and Sweden; they produced a report which was adopted by I.S.O. 46 as a basis for further discussion—which means, in practice, that national standards organizations are to be asked to submit any representations which they may have to make on this report to I.S.O. 46 as soon as possible, with a view to a second international meeting being held next year at which the code can be given final form. In point of fact, only one or two points remained at issue between the five delegates mentioned, and Mr. Kent said he was endeavouring by correspondence to smooth these out so as to present a unanimous report next time if possible.

The latest step in this history was that taken in July by the Royal Society's Scientific Information Conference, which resolved *inter alia* that all concerned with abbreviations should be urged to use the *World List* system and that the *World List* should for its part be asked to incorporate in its new edition minor changes of rule internationally agreed upon. It is well to remember, however, that the *World List* may be unable to wait for the next international meeting of I.S.O. 46—if this is so it seems reasonable to suggest that it should incorporate in its rules any modifications on which international agreement has already been reached in the discussions which have taken place up to the time at which the *World List* goes to press.

A few general considerations emerged from this account of the efforts made towards international standardization in this very specialized field. It would be seen that the standard fulfills a recognized need and that it had been arrived at thus far by the endeavours of those who would constantly have occasion to use it. Mr. Lloyd had already pointed out the importance of this; and, indeed, here was an excellent example of progress made by that combination of the expert in the subject and the expert in standardizing technique which Mr. Lloyd had so cogently advocated.

'Let us not think,' said Mr. Kent, 'that an international standard, however good, is the complete answer to all our problems. There will always be local differences which cause national practice to demand some variation from the standard—for instance, the English classical scholar will always say "J.H.S." for *Journal of Hellenic Studies*, and the French will always call wireless "T.S.F." I cannot do better on this subject than to quote a few sentences from a letter which I have just received from Dr. Drachmann, of the Danish Standards Institute, Copenhagen, who writes: "The international rules are laid down only as a guide for the national standards; and where conditions differ, the national standards ought to differ from the international rules. Unfortunately some people have got internationalism on their brain, and because a screw-thread will not fit a nut unless they both are cut to the same standard, they reason that rules for abbreviation must be identical all over the world".'

A lively discussion followed which dealt both with the three opening contributions and with the drafts of two B.S.I. standards, on *Alphabetical arrangement* and on *Bibliographical references,* which had been circulated before the meeting. On a number of points in these drafts the Director of Aslib was asked to convey the feeling of the meeting to the British Standards Institution.

SYMPOSIUM ON CLASSIFICATION

London Meeting, 17th November, 1948

The meeting opened with a tribute by Mr. C. Le Maistre, Chairman of the Aslib Council, to the memory of the late Dr. S. C. Bradford whose sudden death, on 13th November, had taken place a few days earlier. The Chairman, Sir W. Llewellyn Davies, then introduced the speakers.

1. THE BIBLIOGRAPHIC SYSTEM OF CLASSIFICATION

(*abridged*)

By L. A. Burgess, F.L.A.
Deputy Librarian, Southampton Public Libraries

I HAVE approached my task of addressing you to-day with more than conventional diffidence. As an association of specialist librarians, you bring to the consideration of my paper a formidable array of subject specialization. The subject of my paper, too, is a scheme of classification for libraries and all scholarly uses, which bases its principal claim to consideration on the superior quality of its scholarship. Perhaps now you begin to perceive the nature of my dilemma. I am no scholar: I am a plain and very undistinguished worker in a public library: I wouldn't know the difference between the nomenclature of the physician and that of the gardener. In short, there seems no reason why I should be here at all, beyond the very inadequate one that I have conducted an intermittent correspondence over some twenty years with the author of the scheme, Henry Evelyn Bliss, of New York, and tried to assist him with some of the minor details of the scheme. But please realize that in the primary matter of justifying the scheme I am a broken reed: you must judge the scheme from your own study of the schedules, not from my advocacy, which must necessarily be hopelessly inadequate and unfair to one of the great pioneer thinkers of our age.

There is one requirement from a scheme of classification which I may claim to be of paramount importance: I refer to scholarship. A classification scheme is a map of knowledge: it not merely helps you to reach point A, but, if it is carefully drawn with due regard to current information concerning the terrain, its existence should actually help to advance knowledge.

I am sure that my present audience will accept the proposition that scholarship is a *sine qua non* of classification: that the scheme used should present the books and other material grouped in the way to which specialists in the subject are accustomed to think of it and use it. That is the criterion of what Bliss calls 'the scientific and educational consensus'. This is, in fact, the main plank in Bliss's platform; he is the apostle of sound scholarship and his own scheme stands or falls by that criticism. Logically, this ought to be the most satisfactory scheme, in this respect, ever published, and frankly, I believe that actually to be the case. I also believe it to be the most practical, economical, simple and precise scheme for all-round purposes, including the normal purposes of the special librarian, up to documentation level. To give it the precision of Colon is only a matter of detail: of slight additional expansion of its already extensive (and still growing) machinery of auxiliary tables and the like.

Henry Evelyn Bliss is an American and appears to have spent most of his life in New York and since 1892 in the service of the University of the City of New York, where he was formerly Associate Librarian. Bliss is now 78. His interest in classification, cataloguing and allied problems is of very long standing, and for a generation he has been an outstanding figure in American professional life. His own library has been classified by the Bibliographic Scheme since—believe it or not—1902; a greater antiquity than many of the 'veteran' schemes. Of course, during that time the scheme has been modified in the light of working experience; but its broad outlines have not appreciably changed during that time. I believe that the reason for this is that they have been well drafted in relation to the current state of knowledge. Naturally, in the course of time such a scheme will need modification in detail more than in broad principles and overall plan. This scheme, then, has had the unique and inestimable advantage of some forty-five years of patient work of revision and practical testing against workaday conditions before publication.

At the same time, all these years, Bliss has been plumbing the hitherto uncharted depths of research into the processes of classification, its philosophic implications, its logical thought processes, its psychological implications, and sifting the mass of evidence afforded by the philosopher-classifiers and the great bibliothetic and other utilitarian schemes. It was not, however, until 1929 that he published his monumental *Organization of Knowledge and the System of the Sciences*, the first of the series of works that have revolutionized the study of our subject.

Bliss's books are not easy reading. They are bulky, rather long-winded, and his language is stiff, ponderous and inflexible. This first book, nevertheless, has sterling merits. It directly relates classification and libraries, on the one hand with the scientific and educational organization of knowledge by and for scholars, research workers and educators, and on the other hand with the promotion of social organization. A broad survey is made of all the current work in multifarious fields designed to organize knowledge, and the fundamental principles of classification, its logical and psychological principles, and, of course, the order of nature are discussed. The final section of this great book takes the form of a searching historical and critical survey of all the leading schemes of classification propounded by philosophers and scientists, from Plato to the present day. The consideration of bibliothetic schemes is reserved for the second book.

The Organization of Knowledge in Libraries and the Subject Approach to Books first appeared in 1933. It is, of course, a companion work and its scope has already been suggested. Bliss deals first with the basic principles of library classification, of which this is the most authoritative exposition; he studies the relationship between classification and cataloguing, and then proceeds to study critically all the leading schemes of book classification. Throughout the book, as the argument is developed, we perceive the deficiencies of all existing schemes on the score of inadequacy of scholarship to meet the needs of the scientist and student in any field. I am not going to pretend that this book is not permeated with special pleading for Bliss's own scheme of classification. In view of Bliss's personal history and the part his scheme has played in his career, it would be surprising if his attitude towards other schemes were not entirely conditioned by prejudice in favour of the scheme which had then occupied chief place in his thoughts for more than thirty years—now nearly half a century! To him this scheme represents the nearest possible approximation (at the present time and in the present state of knowledge) to the ideal order of knowledge.

The first draft of the new scheme was published in a two-place expansion in 1935, as *A System of Bibliographic Classification*, and a second edition, considerably revised, appeared in 1936. These are, so far, the only editions to exemplify the work as a whole. The first part (classes A–G) of the complete four-volume, three-place expansion, appeared in 1940, and volume II (classes H–K) appeared in 1947. Volume III is due to appear this year.[1] All the schedules of all editions are printed by offset process from the author's own typescript—a rather ugly format, but meticulously accurate. This expansion (three places, or occasionally four) is regarded as definitive and as final for all normal library usages. To those fresh from the Dewey scheme this must appear startling in its (perfectly correct) implication that a total of 3 to 5 symbols (including an auxiliary table symbol) prove adequate for very precise definition. This, however, is indeed the case: it is due in part to the breadth of the notational base (9 + 26), but in still greater measure is it due to the careful planning of the scheme to spread the notation economically in relation to the distribution of topics and their subdivisions.

The notation of the scheme uses the whole alphabet (normally holding Z in reserve for contingencies) and also the figures 1–9; these last are normally used for bibliographic considerations, and the numeral sequence always takes precedence of the alphabetical. Lower-case letters are also used for a mnemonic topographical auxiliary schedule—to subdivide geographically at any point of subdivision by topic. (Cf. the parallel devices in most other schemes.)

If we examine the outline of the scheme in the concise synopsis supplied[2] we shall observe that the underlying knowledge-scheme has a structural framework involving relationships on two planes—vertical and horizontal. There is a clear line of developmental sequence from top to bottom of the tables, and at the same time there is a horizontal relationship at each stage between corresponding places in the four columns, which represent four modes of thought, each persisting through the whole field of development. Bliss does not mention this, but I am irresistibly reminded of Bacon's scheme in the *Advancement of Learning*, with its facultative grouping into History, Philosophy and Poesy.

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[1] To date, this does not seem yet to have been published.—*Editor.*

[2] By kind permission of the author, the paper was illustrated by mimeographed copies of Table VIII from the *Manual on Classification* by W. C. Berwick Sayers which were distributed to the audience. Owing to copyright it has not been found possible to reproduce the table in these *Proceedings*, but it should be noted that the *Manual* was published by Grafton & Co. (London) and that the table was taken from the second, revised, edition, 1944.—*Editor.*

The other tables on the chart show the successive stages of development by which this complex 'map' of knowledge is reduced to the ribbon-like 'road-book' strip-map required for the purpose of devising schedules. The alphabetic part of the last table shows the final stage, in which the spread-over of topics in terms of literature affects the 'notational hierarchy' (as contrasted with the purely logical hierarchy). (Incidentally, in the completed schedules, the logical hierarchy of each class is always printed ahead of the summary at the head of the class.)

Here there enters a unique feature peculiar to this scheme. Surprisingly, quite a large range of alternative groupings is permitted. Broadly speaking, all the major schools of thought are catered for. Thus, if you disapprove of the order favoured by the author you may substitute a permitted alternative grouping without dislocating the entire scheme. Take, for example, the case of Religion. By placing this class at P, the author stresses the set of associations which he regards as having most significance: collocation with the great group of anthropological studies, and in particular the association with Ethics and Social Science; the association with History is also stressed. There are, however, many thinkers who prefer to stress the associations with Philosophy: they have their opportunity; for they may shift the entire class to AJ as a sub-class of Philosophy. Those who regard Religion as a species of Divine Learning, different in kind from anything else in the schedule, may use the author's other permitted alternative, class Z.

Note also class U, the Useful and Industrial Arts. Bliss does not favour the inclusion here of the chemical and electrical technologies, which he subsumes under the parent sciences; most branches of engineering, however, he prefers to collocate under class U. The lines of reasoning follow the character of the literature, the usages of practitioners (the 'scientific and educational conspectus') and general practical usefulness. But in every case the alternative groupings are available; places are reserved and the possibilities are clearly set out. Not only in the broad outlines, but in detail throughout the schedules, this principle of alternative placings plays a prominent part in this scheme, of which it is one of the most distinctive features.

The anterior numeral classes are, of course, collections grouped by form, location or other bibliothetic factors rather than by subject matter. These classes are expanded by numeral notation to impressive dimensions. One of the two auxiliary systematic schedules (No. 1) is based on these classes, subdivided with the aid of a numeral notation by these considerations. As figure notation takes precedence of letters, you will perceive that we have here the equivalent of Dewey's table of common-subdivisions, or any of the similar devices incorporated in the leading schemes.

You may now perhaps envisage the scheme expanded: normally by alphabetical symbols for topics. At any given stage of subdivision you get first a sequence of figures representing bibliothetic considerations (cf. Dewey's 01–09) taking precedence of the 'knowledge' expansions of 26 (actually 25) places of letters: each of these is, of course, in turn subdivided in exactly the same way. An illustration or two should make this clear:

BJH	H. Fröhlich.	Theory of dielectrics; dielectric constant and dielectric loss. Oxford. 1949.
CJT	J. G. H. Druce.	Rhenium; Duimanganese; the element of atomic number 75. Cambridge. 1948.

I have already mentioned the Auxiliary Systematic Schedules, which are mnemonic in their application. Actually only two of these are really applicable throughout the entire scheme. Schedule 1 I have already mentioned as the bibliothetic equivalent of the 'generalia' or 'common subdivisions' treatment of all topics. Schedule 2 'for geographical subdivision' is the one I have mentioned earlier as having lower-case letters as symbols: these are highly mnemonic (a = America, e = England, f = France, etc.), and are used exactly as the corresponding tables are used in Dewey, Universal, Cutter, Brown, etc. The other Systematic Schedules apply only within certain specified classes; in some cases they can be applied to the whole class; in others they can be applied only to certain sub-classes or sections. In the Historical classes, the same Systematic Schedules are used throughout several classes, and the same is true of the Language classes.

Since time will not permit of exhaustive treatment of our schedules we can only glance briefly at one or two classes which may be of interest to some of those present.

Class C, Chemistry, is divided into 25 sub-classes, with nice regard to the proportionate distribution of the literature. Note in passing the mnemonic symbols, not obtained by deliberate distortion, but arrived at by pleasant coincidence, as it were: CD Chemical Dynamics, CE Electrochemistry, CI Inorganic Chemistry, CO Organic Chemistry, and the like. The group CI–CR can be expanded by Schedule 8, one of the many special mnemonic tables mentioned above: this provides a series of (actually) 31 places, such as 2 Bibliography, 3 History, development; B Experimental or laboratory study; E Occurrence in nature; L Alloys; T Industry, technology of the chemical, and so forth.

Similarly, CU Special chemical industries and manufactures is subdivided by Schedule 9, where (e.g.) D Laboratories and equipment; M By-products; N Business, economics, finance, etc., provide for a complete analysis of all aspects of a chemical industry, whilst allowing, of course, for alternative placing elsewhere. Bliss, it will be remembered, prefers chemical technology to be grouped with chemistry.

Let us glance at another class, I Psychology. Class H, Anthropology, includes general and physical anthropology and the medical sciences, including hygiene and physical training. Class J is Education: near at hand are the rest of the Social sciences. Psychologists will agree that at last we have got the right context for this science, which has far too long wandered in the wilderness: at least, as far as classification schemes are concerned. Glance over the main headings. Here are a few examples:—IC Sensation and perception; ICA Consciousness and experience; ID Feeling and emotion; IDM Moods, as affected by feelings; IG Personality, intelligence and mental abilities; IGF Mental abilities; IGT Group tests; IJ Mental hygiene, sanity; IK Subconscious Mental States, and Psycho-analysis; IKL Psycho-analysis; IKT Transference; IM Psychiatry; IMI Institutions, hospitals, etc.; IN Psychological jurisprudence; IO 'Psychical research'; IOJ Astral bodies; IW Applied psychology; IWP Personnel: psychology, selection and management.

I am not sure how far your interest will extend to some of the classes of more 'popular' interest. The special treatment of Religion, for example, with special schedules dividing each religion or sect mnemonically is extremely valuable. I have a special enthusiasm for Bliss's treatment of the historical studies where a topographical grouping has been adopted as a primary basis of division. Classes L–O are devoted to these studies, and throughout the topographical classes the minutest possible subdivision is practicable by locality. At every stage of subdivision we may use special mnemonic schedules to differentiate Geography, Archæology, Archives, Biography, Comprehensive histories, Constitutional, Diplomatic, Economic, Social, Ecclesiastical, etc., History and History by periods. Alternative tables permit of more or less detail of expansion in this way in accordance with the importance (to the library) of the locality under consideration. Care has been taken to ensure that such units as mountain ranges, rivers, dioceses, etc., have places allocated as well as counties and towns.

The philological classes, W–Y, are also most impressive in the use made of systematic auxiliary schedules. W covers General philology and languages other than European. X covers the Indo-European languages; Y covers English, as the mother tongue. Each grouping covers language and literature. But the question of how to correlate language and literature and criticisms, and original text is answered by different *modes* of treatment, any one of which may be chosen to group books, etc., according to the special requirements of the library. Again, special tables are provided—in greater detail for the principal languages—to subdivide each particular language.

Some general considerations—of rhetoric, drama, and the like—are found associated with English in class Y; possibly illogical, but very practical.

BURGESS: BIBLIOGRAPHIC SYSTEM OF CLASSIFICATION

This is not a scheme to be presented in one meeting—still less as part of one meeting's agenda. It will repay detailed study of the schedules. Look, for example, at the amazing economy of symbols; perhaps the most economical of any published scheme: yet this facility never prejudices the essentially scholarly character of the scheme as a whole and its details.

2. THE COLON CLASSIFICATION

By A. J. Wells, F.L.A.
Acton Public Library

THE Colon Classification of Dr. Ranganathan differs in several fundamental ways from other schemes of classification and challenges a number of accepted ideas about the nature of classification schedules. The new developments, however, are fundamentally extensions of ideas already existing in incipient forms in the other schemes. Its various 'devices'—so called by the author—are generally speaking no more than a rationalization of existing methods of synthetic number building common to the major schemes. The two principles which mark out the Colon Classification most distinctly from all others are the principle of facet analysis and the principle of mnemonics. I shall have to content myself here with an attempt to explain the principle of facet analysis.

Briefly, facet analysis is the division of a specific subject into its constituent elements. This pre-supposes that every specific subject, no matter what the degree of its specificity, can be analysed into a manageable number of constituent elements. It pre-supposes that the whole of knowledge may be divided into a number of fundamental concepts, which, varying in appearance with each class, are, nevertheless, manifestations of the same concepts. The concepts recognized in the Colon Classification are five in number: Time, Space, Energy, Material and, what Ranganathan has called, Personality. The first four of these I need not explain, except perhaps to point out that Energy is intended to cover both mental and physical energy which affect the material or thing upon which they are exerted. Thus Methods of Teaching are just as much manifestations of the Energy concept in the class Education as Methods of Manufacture in the class Package Making. The Personality concept is the thing or the part of the thing or the kind of the thing which is subjected to further division by the other four concepts. The parts of the body in the class Medicine are said to be divisions of the Personality facet; the kinds of crops in the class Agriculture; the kinds of groups or persons (the Educand) in the class Education are also said to be divisions of the Personality concept.

For each of these concepts (or for as many of them as apply in each case) under each class, Ranganathan has worked out separate schedules. He calls the sum of the divisions based on these concepts, when associated with a particular class, the facets of the class (hence the term facet analysis). The formula which is to be found at the head of each class and which determines the order in which the classifier applies the divisions of the facets is called the facet formula.

Thus in the class L Medicine, the formula L [O] : [P] means that Medicine consists of two facets [O] or Organ facet, which is a manifestation of the Personality concept and [P] or Problem facet (i.e. the methods of study and treatment of the human body or of parts of it), which is a manifestation of the Energy concept. Moreover, the formula decrees that the classifier will *firstly* select the appropriate digit from the schedule of divisions of the Organ facet and *secondly* the appropriate digit from the schedule of divisions of the Problem facet.

You will appreciate that the difference between the methods of presenting the schedules in the Colon Classification and in others lies in this: that while other Classifications enumerate specific subjects or, as Ranganathan has called them, derived composite subjects, the Colon Classification lists only the elements in each of the facets of the class. The classifier is required to combine the elements himself and to build up numbers for derived composite subjects. This is not only a great economy in schedule space, but it frequently enables a classifier to class exactly a specific subject not enumerated in the other schemes of classification, and for which there is, therefore, no specific number, for it is clear that the possible combinations of two, three or four facets are too many to be enumerated.

Broadly speaking, the five fundamental concepts correspond to the principles of division which the makers of other schemes of classification consciously or intuitively must have observed in arriving at the enumeration of specific subjects which form their schedules. We can discover, though often with great difficulty, the principles or characteristics of division which Dewey used in constructing his schedules. In fact, we *have* to do this, whether we are fully aware of it or not, whenever we classify a subject which has not been specifically mentioned in the schedules. Ranganathan has explicitly stated, for each class, the characteristics of division employed and the order in which they have been applied (this is the purpose of the facet formula) and, if his theory is correct, he has succeeded in reducing the multifarious characteristics of division to a manageable number of fundamental concepts.

I propose to take four specific subjects in the class Medicine, to show first how they are handled by Dewey in the Decimal Classification, and then how they are handled in the Colon Classification. From this comparison, I hope not only to illustrate the principle of facet analysis, but to show how the lack of it in the Decimal Classification is largely responsible for its present unsatisfactory condition, and that the absence of facet analysis in any scheme of classification, *however good its present order*, must inevitably lead to the destruction of that order at least in those branches of knowledge which are in the process of development. This must be a matter of outstanding importance to special librarians, who are dealing with literature in new and fast developing areas of knowledge.

The four specific subjects I have chosen are:—

(1) Diseases.
(2) Tuberculosis.
(3) Diseases of the Lungs.
(4) Tuberculosis of the Lungs.

I think we shall agree that the class Medicine, at any rate so far as these four items are concerned, is made up on two parts or facets, the Organ facet represented here by Lungs and the Problem facet represented here by Diseases. The Decimal Classification number for the class Medicine is 61 and, as you may recall, the class divides first by Problem, which gives us such divisions as Anatomy at 611, Physiology at 612 and so on to Diseases at 616, and secondly by Organ (but we shall see that this order is by no means consistent).

We can set out the general formula for the class 61 Medicine thus :—

Medicine [Problem] [Organ].

If we take the four specific subjects and apply the formula to each we get :—

(1) Medicine [diseases] [no organ facet specified, therefore vacant].
(2) Medicine [tuberculosis] [no organ facet specified, therefore vacant].
(3) Medicine [diseases] [lungs].
(4) Medicine [tuberculosis] [lungs].

The Decimal Classification numbers for them are :—

(1) Diseases	616
(2) Tuberculosis	616.995
(3) Diseases of the lungs	616.24
(4) Tuberculosis of the lungs	616.246

The order indicated by the class numbers is 1, 3, 4 and 2. The general treatment of tuberculosis has been relegated to the end of the class and has failed to achieve its proper place with the general treatment of diseases.

There is more to it than this. If we analyse the class numbers according to our formula we get :

$$\text{(1)}\ \underset{61}{\text{Medicine}}\ \underset{6}{\begin{bmatrix}\text{Problem}\\ \text{diseases}\end{bmatrix}}\ \begin{bmatrix}\text{Organ}\\ \text{vacant}\end{bmatrix}$$

$$\text{(2)}\ \underset{61}{\text{Medicine}}\ \underset{6996}{\begin{bmatrix}\text{Problem}\\ \text{tuberculosis}\end{bmatrix}}\ \begin{bmatrix}\text{Organ}\\ \text{vacant}\end{bmatrix}$$

$$\text{(3)}\ \underset{61}{\text{Medicine}}\ \underset{6}{\begin{bmatrix}\text{Problem}\\ \text{diseases}\end{bmatrix}}\ \underset{24}{\begin{bmatrix}\text{Organ}\\ \text{lungs}\end{bmatrix}}$$

$$\text{(4)}\ \underset{61}{\text{Medicine}}\ \underset{6}{\begin{bmatrix}\text{Problem}\\ \text{diseases}\end{bmatrix}}\ \underset{24}{\begin{bmatrix}\text{Organ}\\ \text{lungs}\end{bmatrix}}\ \underset{6}{\begin{bmatrix}\text{Problem}\\ \text{tuberculosis}\end{bmatrix}}$$

From this it appears that there are three facets in example 4, but the first and third are parts of the same (Problem) facet. We have, in fact, cross classification arising because one characteristic of division (Problem) was not exhausted before another (Organ) was introduced. It is this which has led to the unhappy medley. The digit 6 which represents the

Problem facet, Disease, is securely pinned between 61 of the general class number for Medicine and the 24 for Organ facet, Lungs, and being thus imprisoned it cannot expand. When circumstances press, a compromise is forced upon the maker of the classification and he is driven to the expedient of attaching a Problem facet once again after the Organ facet. It is at this point that the collapse of the original order begins. Imagine this state of affairs multiplied throughout the schedules of the Decimal Classification over the past seventy years, and you begin to appreciate why its order is no longer satisfactory.

But how can a maker of a classification exhaust a characteristic of division since he cannot predict what new development may take place? He cannot, of course, and unless he can allow for the possibility of subsequent developments at any point in his schedules his classification is bound to face an ever-hastening collapse of his original order.

It is the claim of Dr. Ranganathan that the Colon Classification provides for this through the principle of facet analysis. Let us examine this claim in relation to our four examples. The Colon Classification reverses the order of the formula found in the Decimal Classification, and the following formula is found at the head of the class L Medicine :—

Medicine = L [Organ] : [Problem].

The effect of this order, though it is not at first apparent, is to arrange first all diseases treated generally, then all organs treated generally, followed by organs treated from the point of view of specific diseases. The arrangement of the four items therefore is :—

(1) Medicine $\begin{bmatrix}\text{Organ}\\ \text{vacant}\end{bmatrix} : \begin{bmatrix}\text{Problem}\\ \text{diseases}\end{bmatrix}$
L : 4

(2) Medicine $\begin{bmatrix}\text{Organ}\\ \text{vacant}\end{bmatrix} : \begin{bmatrix}\text{Problem}\\ \text{tuberculosis}\end{bmatrix}$
L : 421

(3) Medicine $\begin{bmatrix}\text{Organ}\\ \text{lungs}\end{bmatrix} : \begin{bmatrix}\text{Problem}\\ \text{diseases}\end{bmatrix}$
L45 : 4

(4) Medicine $\begin{bmatrix}\text{Organ}\\ \text{lungs}\end{bmatrix} : \begin{bmatrix}\text{Problem}\\ \text{tuberculosis}\end{bmatrix}$
L45 : 421

The colon, used to separate the two facets, enables each facet to grow without prejudice to the other and the classification can thus preserve its preferred order indefinitely. In the Decimal Classification the digits are, as it were, cemented together, and once closed up insertions cannot be made. Thus the digit for tuberculosis treated in relation to the lungs has to be tacked on the end of the digits for the organ, and tuberculosis when treated generally has to find a place at the very end of the schedules away from other diseases treated generally.

Attempts have been made with U.D.C. to obtain freedom of development for the facets of a class by using a dash. Its function is the same as that of the colon and it is evidence that special librarians are conscious of the need for such a device. Mr. B. I. Palmer,[1] however, as long ago as 1944, examined this matter and concluded that, even if it were possible to disentangle the various constituent elements at the basis of the Decimal Classification's schedules, it would probably be necessary in the end to abolish the Dewey schedules altogether, since long years of enforced compromise have completely undermined any helpful order which the Decimal Classification originally possessed.

If, therefore, such a drastic revision is likely, it seems reasonable to reconsider the canons of classification, particularly in the light of the twenty-five years' work which Dr. Ranganathan has done, and which has given rise to this novel concept of facet analysis.

Dr. Ranganathan's claims, however, do not rest here. By means of a new conception of the function of mnemonics, centred around the principle of the five fundamental concepts, he claims to have shown the possibility of a self-perpetuating classification in which individual classifiers will be able to construct their own numbers for new subjects and by means of which, also, a librarian working in a special field will be able rapidly to construct complete schedules for the literature of his speciality.

The schedules for Package Manufacture which follow are such an attempt, which I have made in co-operation with Mr. D. J. Foskett, of the Metal Box Co. I hope they will prove sufficiently interesting to stimulate others, more competent than I, to investigate the claims of this ingenious system of classification.

SOME SUGGESTIONS FOR A CLASSIFICATION OF PACKAGE MANUFACTURE ON COLON PRINCIPLES

If we consider the literature on package manufacture in relation to the five fundamental concepts, Personality, Material, Energy, Space and Time, we shall, I think, agree that the main facets of the class will be the Part facet (Personality concept), Material facet (Material concept), and Fabrication facet (Energy concept). Space and Time concepts will be manifested in such ways as packaging in different countries at various times, and will be taken care of by country and time numbers common to the whole classification.

The basic elements may be stated thus :—

Package Manufacture [Part] : [Material] : [Fabrication].

I have made the number MX041 for the main class Package Manufacture. It is a mnemonic number made up of the number for Useful Arts, M and the number for packaging, X : 41 from the Economics schedule. (The Colon in X : 41 is replaced by a zero in these circumstances.)

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[1] Indian Library Association Conference, Nagpur, 1944.

The facet formula will be :—

MX041 [P] : [M] : [F].

Fundamentally all that remains to be done now is to enumerate the various divisions of each facet and to arrange them in the most helpful order. I give below a sample of the divisions under each facet. Much more division needs to be done, particularly under the Material facet where a common order for use in all the Useful Arts might well be worked out. Some means of arranging plastic materials, which will enable new plastics to receive mnemonic numbers, needs to be devised.

Many of the divisions give rise to further facets peculiar to them, for example the division 94 (Faults) of the Fabrication facet requires further division by the kind of fault and method handling; different materials may require different methods of fabrication and the suggested Fabrication facet may, in fact, be itself a 'differentiated' facet producing not one general schedule, but a series of schedules each associated with a particular material.

PACKAGE MANUFACTURE MX041 [P] : [M] : [F].

Divisions of the Part facet or [P].

1	Body
2	Ends
3	Seams
31	Side seams
32	End seams
5	Lining
55	Cushions
58	Partitions
6	Handle
8	Closure
97	Label

Divisions of the Material facet or [M].

1	Wood
2	Paper
22	Cardboard, rigid paper, pressed board
3	Plastics (to be further divided)
4	Stone, earthenware
5	Metals (to be further divided)
6	Glass
7	Woven vegetable fibres, cloth, canvas
91	Rubber
97	Skin

Divisions of the Fabrication facet or [F].

1	Preliminaries
11	Design
2	Making
21	Scoring
22	Slitting
23	Cutting

24	Moulding
25	Drawing
26	Extruding
27	Stamping
28	Blowing
3	Assembling
31	Soldering
315	Fluxing
32	Welding
33	Gluing
34	Stitching
36	Tab and slotting
5	Proofing
7	Filling
8	Closing, sealing
94	Faults
95	Decoration

The following examples were taken from *Packaging Abstracts* and illustrate how the schedules are combined to build up a class number.

The examples are given in the order in which they would be arranged in a classified catalogue.

(1) Package design training centre.
MX041 : : 11*b*3.
(*b*3 is a common subdivision for 'training' taken from the Colon Classification.)

(2) Machine for filling a container with liquid.
MX041 : : 7*e*0C25.
(No particular type of container is mentioned here, hence the first two facets are kept vacant. *e* is a common subdivision for machines taken from the Colon Classification. C25 is the number from the Physics class meaning liquids and is added after a zero to the main class number to indicate that the main part of the subject is *biased* to the second part, i.e. filling machinery *for* liquids.)

Paper Containers

(3) Paper sacks.
MX041 : 2.
(This number really means paper packages and needs further division.)

(4) Paper garment bag.
MX041 : 20M8.
(As in example 2, the zero indicates that the package is biased to the subject 'Garments', the number for which is taken from the main class M8 Dressmaking.)

(5) Electronic device to eliminate faulty paper packages.
MX041 : 2 : 94 : D665*e*.

(6) Machine for wrapping with paper.
MX041 : 2 : 8*e*.
(7) 'Twist' and 'Bundle' wrapping machine.
MX041 : 2 : 8*e*.
(8) Properties of paper for wrapping photographic plates.
MX041 : 2 : CoM85.

Cardboard Containers

(9) Cardboard cartons for carrying glass containers.
MX041 : 220MX041 : 6.
(10) Assembling cardboard blanks with tabs and slots.
MX041 : 22 : 36.
(11) Machine for filling cardboard cartons.
MX041 : 22 : 7*e*.
(12) Machine for feeding cigarettes into [cardboard] packet.
MX041 : 22 : 7*e*0MJ452.
(13) Cardboard container sealing machine.
MX041 : 22 : 8*e*.

Canvas Containers

(14) Method of filling canvas bags.
MX041 : 7 : 7.
(15) Filled bag sewing machine.
MX041 : 7 : 8*e*.

Linings

(16) Method of forming paper lining in cardboard cartons.
MX0415 : 20MX041 : 22.

Closures

(17) Closure for bottles.
MX04180MX041 : 6.
(18) Combined cardboard spoon and lid.
MX0418 : 22 : 12.
(19) Metal bottle cap.
MX0418 : 50MX041 : 6.
(20) Machine for fitting metal caps.
MX0418 : 5 : 8*e*.

Bibliography

A full discussion of the Colon Classification must be sought in the works of Dr. Ranganathan, the most important of which are :

(1) *Self-Perpetuating Classification* in *ASLIB Journal of Documentation*, Vol. 4, No. 4, March, 1949, pp. 223–44.

A general discussion of the need for a classification which can be developed in use by individual classifiers and the means by which the Colon Classification aims to meet this need.

(2) *Elements of Library Classification*, 1945.

A short explanation of the principles of classification and how they are applied in the Colon Classification. It includes certain marked advances since the *Prolegomena to Library Classification* (see below), particularly in the matter of principles of arrangement and the development of the idea of classification as a language of ordinal numbers.

(3) *Library Classification: fundamentals and procedure*, 1944.

A 'drill book' with many worked examples designed to give students practice in applying the principles of classification. All examples are worked out for both Colon and Decimal Classifications.

(4) *Prolegomena to Library Classification*, 1937.

An early attempt to arrive at a statement of principles. Both the Decimal and Colon Classifications are used as the basis of exposition and other important systems are analysed.

(5) *Colon Classification*, 2nd edition, 1939.

Includes not only the schedules of the Colon Classification, but copious examples of 'derived composite subjects' with their class numbers.

(6) Articles are beginning to appear in *ABGILA*, the newly revived journal of the Indian Library Association, in which Dr. Ranganathan is developing the ideas of differential and optional facets. The first is in *ABGILA*, Vol. 1, No. 2, June, 1949.

INFORMATION FROM THE ADVERTISEMENT PAGES

By Geoffrey A. Shires
Dunlop Rubber Co. Ltd.

London Meeting, 15*th December*, 1948

In the unavoidable absence of the Chairman, Mr. C. Le Maistre, at the beginning of the meeting, Miss E. M. R. Ditmas introduced the speaker.

ANYTHING up to 80 per cent of a technical journal to-day consists of advertisements. The advertising pages are often cunningly woven among the others to increase their chance of being read, and it is a fact that many readers are as likely to be arrested by an advertisement as by a feature in the text. Abstractors, however, or information staff scanning a periodical for a purpose, may be inclined to regard this 80 per cent advertising as a bore, grudgingly admitting responsibility for trade announcements of plant, apparatus, materials, and the books and other publications listed, but giving other publicity scant attention.

Now, surely it seems reasonable that an information service, in using the literature, should accept two prime duties: to squeeze out all possible information that can be useful, and to serve all its customers with information in all the ways in its power? There is a great deal in a periodical besides articles and scientific papers, and there are customers besides research men and specialists—from executives to juniors and students.

Commendable orderliness and precision in information work sometimes shuts out the imagination that seeks to discover what else may be useful and who else may be interested or able to profit by the service; and this short paper is written to encourage the widest possible approach to information service, and in the belief that an information staff serving any group ought to select its material, not only for its scientific or specialized interest, but also for its broadly informative and educational value. The varied material extractable from the advertisement pages, once they are regarded as a legitimate quarrying ground, makes them a very suitable example to illustrate this idea of the wide approach.

It is convenient to class as advertising :—

Commercial (industrial) advertisements ;
Publishers' announcements (including book reviews) ;
Notices of meetings, lectures, training courses, conferences, exhibitions ;
Appointments, vacant and wanted.

Commercial, Industrial

These strike the abstractor or information staff from two main standpoints—general, and competitive. A commercial advertisement in a trade or scientific periodical will stand first on its merits as technical dat Details of plant or apparatus, especially if new, may be as important t an industrial firm or research institution as the contents of a piece o scientific investigation. So may be the fact that it exists at all, and its source and availability. This is obvious, but advertisements are rarely covered by abstracting services outside industry. Certainly information of this kind may pay dividends more easily assessed than is usual in information work; advertisements of trade competitors make an even clearer case, since, like patent specifications, they may offer the only evidence of what others are doing. With some products, where fashion or style changes fairly often, advertisements become one of the few instances where technical information really justifies 'hot' service. Trends in advertising styles and copy-writing may interest technical designers and others.

Trade advertisements, therefore, are highly commended to the information officer's attention; not as a newly discovered source, but as one that deserves to be recognized as in his province. They are too often left to fall between the stools of sales and purchasing interests.

Publishers

Trade announcements of books and new periodicals, lists of publications received, and reviews, are the staff of life to the information department or library. A proportion of books, etc., will be bought on sight, and more after inspection. There remain many that can be drawn to the attention of staff for their information, or to decide if they are worth buying. Most information services announce 'publications noted' as well as 'added to the library', and book reviews, too, may be as worthy of abstracting as other articles. Watch should be kept for new editions.

Meetings, etc.

As notice of these is sometimes short, prompt treatment is necessary. Many weekly papers print lists of forthcoming events, and these are conveniently handled by producing a weekly calendar if it can be got out in time; otherwise personal advising is required.

In a progressive organization, especially with wide technical or research interests, public lectures, conferences, exhibitions may be important contributions to the study and knowledge of the technical and executive staff. Not everything that is said is also printed, and personal attendance of selected people may bring valuable information, particularly from open discussion. Conferences mean contacts, too, and exhibitions display trade and other trends. Courses of specialized training and instructional lectures may be picked up in the same way from the advertising pages. Reasonable encouragement and opportunity ought to be given for appropriate staff at various levels to take advantage of events of this kind; it is equally important, of course, that they return a statement on their findings and impressions, which can be made generally known at the discretion of the information officer. If advance arrangements are cessary to obtain tickets or accommodation, the information department may have to be prepared to make them.

The fresh approach implied here is that this information, while it can and should be used like any other information service material, can well be applied also to the general educational benefit of staff concerned. Much advertising falls on stony ground, but the information service at least should be receptive.

Preprints and Reprints

The notice of a paper to be read may be the first intimation of new or important work, and the information department should take the opportunity to obtain preprints if required. Sometimes this demands membership or the services of a member of the body concerned. Prior knowledge of a paper also allows application for reprints or separates to be supplied, where convenient, before the work is generally available.

'Jobs'

It is not the responsibility of the information department to deplete the ranks of its organization by publicizing better jobs ! At the same time, a surprising amount of information can be gleaned from 'appointments vacant' and 'wanted'. For example :—

New centres of research or teaching.
New subjects of instruction.
Fresh commercial developments and interests.
Salary scales.
Changes of personnel and addresses.

Such information is valuable to scientific and management sides, and the direct use of 'situations wanted' is obvious. It may be less plain that the information service should be responsible for bringing this kind of news from the advertisements to the attention of the right people.

'Smalls', particularly in trade periodicals, need not be neglected either, and may offer fruitful sources of plant, apparatus, material, literature, patents interests and staff.

This paper is not concerned with the documentation and handling of advertisements as reference data. It has suggested that some of the material can be regarded and treated exactly as other abstracted literature, but much will be of passing interest only. Otherwise, trade advertisements, for example, can be indexed and filed if required, either as separate cuttings or classified in bulk. Where periodicals are kept entire, indexing may be enough. If they are bound without end-paper advertisements, selected cutting and filing can be done.

If some readers remark that they do now all that this paper has indicated, then it is evidently on sound established lines ! If they are startled by a new world swimming into their already harassed ken, then it has served its purpose in providing the initial stimulus to a broader outlook on information service in general.

REARRANGING AND RECATALOGUING A REFERENCE LIBRARY OF BOOKS

By J. E. Wright

Librarian, Institution of Electrical Engineers

London Meeting, 15th December, 1948

Mr. Le Maistre introduced the speaker who had been able to illustrate his paper by the exhibition of a number of the items of equipment referred to.

Historical

WHEN in 1910 The Institution of Electrical Engineers moved to the present premises in Savoy Place the magnificent room set aside for the library seemed more than adequate accommodation. Nevertheless, in 30 years a library amasses a great deal of material, and this was especially true of one devoted to electrical and allied subjects in which there has been so much development.

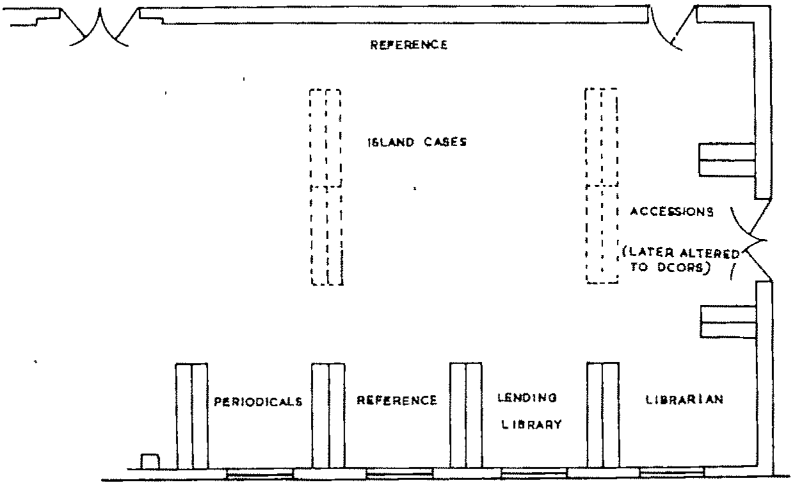
By 1939 it was apparent that additional space was needed and plans for rearranging the library were considered. These envisaged, amongst other changes, separate office accommodation and the removal of the lending library books from the main reference library. It was also planned to abandon the old arrangement of the books in arbitrary subject groups and to adopt the Universal Decimal Classification, as this system is used in so many special libraries, including a number concerned with electrical engineering. Unfortunately, when war broke out these plans had to be postponed. Throughout the war years the library was short staffed and it was impractical to attempt any changes. There was, in fact, some advantage in having reference and lending libraries in the same room. By the end of the war the need for additional space had become acute, but the librarian, who had been far from well for some time, died in 1946 and there remained the much-pressed assistant librarian, who had consented to defer his retirement, and only one assistant. Consequently, it was not until 1947, after new staff had been recruited, that the long-postponed reorganization could begin.

The most urgent task was the rearrangement and reclassification of the 8,000 books in the reference library and the preparation of a new catalogue. This had to be done without closing the library; the old system remaining in use until the new system could be brought into operation.

Before the work could start it was necessary to make certain general decisions. It was decided, for instance, to keep first and last editions and any intermediate edition varying materially from these in the case of books relating to electricity, and the last edition in the case of books on other subjects. Space for future growth for at least five years and if possible ten was another requirement. Because in the past books had not been given an accession number, it was considered necessary to prepare an accessions record of the books checked as being in the library at the time of recataloguing, and to keep the usual kind of accessions register in future. The numbers used for the old books were prefixed with 46/, new books taking the prefix 47/ and later 48/. Another decision was that the new catalogue should include a subject section as well as an author section.

The Old Arrangement

The arrangement of the library before the reorganization is shown in the diagram. It will be seen that the set of books comprising the lending library was shelved for the convenience of the staff between bays containing the reference library. Another bay held an accumulation of books and papers which were the day-to-day tools of the librarian, and another bay, subsequently replaced by new entrance doors, held books which had recently been added to the library, but which had not been catalogued. The shelves in this part of the library were full and could not have held a single additional volume.



The reference library books were arranged in groups under a number of subject headings which were arranged alphabetically round the room. Thus:—

Accountancy, Agriculture (Electricity in),
Aircraft electrical equipment, Armatures,
Artificial lines and wave filters.

With such an arrangement each heading was a watertight compartment, the books in it bearing no relationship at all to those in adjacent groups. As members then, as now, had full access to the shelves there was no subject catalogue, and the author catalogue had fallen into arrears during very difficult times in the war years.

Preparatory Work

Details of the reorganization were worked out before any of the work was started, and only a few minor alterations were made as the work progressed. The idea was to divide the operation into a series of successive stages, each of which could be completed before the next was commenced. This simplified the work considerably, particularly as inexperienced and untrained staff were assisting.

The stages were :—

(1) Prepare manuscript cards giving cataloguing details, author, title, etc.
(2) Classify books.
(3) Prepare typed cards from manuscript cards.
(4) Check typed cards against the books.
(5) Turn typed cards into author order.
(6) Check for intermediate editions, duplicates, etc., by the use of 3.
(7) Type subject 'Stripdex'.
(8) Type author 'Stripdex'.
(9) Anticipate probable position of books when rearranged in U.D.C. order.
(10) Rearrange books in approximately correct U.D.C. order.
(11) Rearrange books in final order.
(12) Tidy up shelving.
(13) Label.
(14) Build up subject key in U.D.C. order.
(15) Build up subject key in alphabetical order.
(16) Insert cross-references, etc.
(17) Type key on 'Stripdex'.

The most urgent requirement was additional shelf space, and this was obtained by installing island cases, giving 144 feet of shelving. Whilst these were being made, other preparatory work was going on.

The first step was to give each book the accession number previously referred to, and to enter this and details respecting each book on a 5- by 3-inch card. The details considered necessary were title, author, edition and date. Two assistants worked through the books on the shelves whenever time could be found for this work.

More cataloguing details were not included because the 'Stripdex' system to be introduced limited the space of an entry to two lines of type. Thus :—

Television receiving equipment.
Cocking, W. T. 2nd ed. 1947. 621.397

However, this was not considered to be a serious disadvantage because further information could always be obtained from the books on the shelves, and by limiting the amount of detail in this way a considerable saving of time was effected. In the case of the lending library the position is different, and it is intended to give more details in its published catalogue.

To avoid confusion each assistant was allotted blocks of accession numbers. As the books were dealt with in this way they were passed, with the new cards in them, to the assistant librarian or librarian for classification. A subject key was compiled, showing, in particular, any U.D.C. number which had been built up by the use of the analytical or auxiliary tables or which had been selected in preference to a possible alternative. These cards, filed in U.D.C. order, simplified classification and prevented discrepancies. After the books were classified they were restored to their original places on the shelves.

A second set of cards was typed from the manuscript cards. These were checked with the books rather than against the manuscript cards to keep the number of errors to a minimum. They were then filed in author order.

In addition to the reference library books on the shelves on the main library floor there were, in the gallery, a considerable number of intermediate editions, early works—particularly on radio—and duplicate copies. The set of typed author index cards was used as a means of checking through these books to eliminate unwanted copies and to absorb any volumes which were required for the reference library.

It had been decided to indicate approximately the date of publication of every book by means of different coloured 'Stripdex' entries in accordance with the following code.

–1900	Old gold.
1901–1920	Green.
1921–	White.

Estimating the quantities of the different colours was not easy, neither was it easy to anticipate the percentage wastage. Calculations were based on the proportion of the colours in a sample set of manuscript cards. Because the 'Stripdex' entries for the final catalogue were typed on sheets of 25 entries and separated afterwards, the typed set of cards was marked with a yellow or green diagonal line in accordance with the coding and sorting into three groups according to colour. These three groups were then sorted into U.D.C. order. This greatly assisted the typist, who otherwise would have had to keep changing the coloured 'Stripdex' sheets in her machine. In this way the subject index was typed on to 'Stripdex' strips and then checked against the typed cards. When this had been done the typed cards were re-sorted, this time first into author order and then into colour groups to facilitate typing of the author index.

The Changeover

Whilst the typing was in progress arrangements for changing the books over to U.D.C. order were going forward.

From the manuscript cards in U.D.C. order an estimate of the distribution of cards, and therefore of the books, amongst the main U.D.C. classes was made. An approximate temporary labelling of the shelves was worked out from this result and all was ready for the changeover which was to be made during a week-end. The method was to put each book approximately in its new position, but resting on its spine, so that eventually every book was on its spine instead of being upright. After this had been done each book was put into its correct place according to its U.D.C. number and turned up into the normal position. The books were then finally arranged in author order as a further subdivision where a considerable number of books having the same U.D.C. number made this necessary. The shelves were then correctly labelled with a temporary label.

The next task was to complete the subject-key. The cards, previously in U.D.C. order, were arranged alphabetically by the use of suitable catch-words. Cross-references were inserted to avoid, as far as possible, the use of colon references in the catalogue. Thus :—

Electro-refining 621.357.7
See also Electric furnaces 621.365 and Electrometallurgy 669.04

Geomagnetism 550.38
For Terrestrial magnetism see 538.7

Insulation 621.315.6
See also Dielectrics 537.226 and Plastics 679.5

As a final check the entries in the subject-key and the books on the shelves were carefully scrutinized to ensure that, as far as possible, books on the same subject were shelved under the same number. For instance, books on sound-film engineering were shelved under 534.86, not under 778.5, and all books on thermionic valves under 621.395, not some under 537.54.

The changeover was now practically finished except for the final labelling of the shelves. Xylonite label holders were used to hold stencilled labels having suitable catch-words chosen to indicate the grouping of the books and giving in each case the U.D.C. number of the group. Where there were more than a shelf of books which could not be usefully further divided by subject, such groups were divided according to the colour coding already described and this was shown by using coloured labels on which the period was also stencilled. In the final spacing of the books on the shelves consideration was given to arranging that the books in each bay of shelves conformed to a more general subject group, so that suitable catch-words could be chosen for labelling the bays. This was found to be possible in most cases, but although this arrangement is helpful and desirable so long as space permits it may not be possible to continue it when the shelves become filled.

The Present System

The finished catalogue is now in use and it has proved very convenient. It is undoubtedly much easier to refer to than a catalogue of cards in a vertical filing system. It reveals at once all the entries relating to books by a given author, or all the books in the library on a given subject, and it simplifies searching to be able to pick out quickly the recent books or the early works from a group by the colour of the entries.

A further facility since added and proving useful shows books on order, but not yet received, by pink 'Stripdex' entries in the author catalogue. This enables the staff to deal quickly with enquiries concerning new books.

The final record required was the accession register, and this was obtained by rearranging the manuscript cards in numerical order by the accession numbers. A book register would have been better, but the preparation of this would have involved a great deal of work which has been avoided by using the cards which had to be prepared for the manuscript of the catalogue.

The Time and Cost of the Rearrangement

In conclusion, it may be of interest to give some facts regarding the time the operation has taken and the approximate cost. The work has been spread over about 14 months. The time taken for the various stages is shown in the schedule below in terms of the full time of one person, but it was sometimes necessary for several persons to co-operate.

(1) Preparation of typed catalogue cards	4 months
(2) Rearrangement of the books	3 weeks
(3) Typing 'Stripdex' entries	10 weeks
(4) Preparation of manuscript catalogue cards	3–4 months
(5) Classifying the books	4 months
(6) Checking, final tidying up, labelling, etc.	3–4 months
(7) Setting up 'Stripdex' catalogue	3 months

The work outlined under items (4) to (7) was carried out by the library staff during normal hours and involved no additional cost. So far as is known unnecessary work was avoided. There might have been a little saving of time in typing the 'Stripdex' entries if they had been typed in duplicate and divided into subject and author entries afterwards, but this is doubtful. In any case, the sorting of so many 'Stripdex' entries would have been very cumbersome, whereas, by typing first the subject and then the author entries, it was possible to build up and finish one part of the catalogue before starting the next.

The additional costs directly attributable to the changeover may be estimated as follows, no allowance being made for the normal running costs of the library, which, of course, continued substantially unchanged over the period during which this work was carried out.

	£
Metal equipment for the catalogue	160
800 'Stripdex' sheets	30
20,000 5- by 3-inch cards	35
Typing the catalogue cards	85
Typing the 'Stripdex' entries	60
Rearrangement of the books	10
	£380

The cost of the work listed in the previous schedule under (4) to (7), although not a direct charge, has been estimated as follows :—

	£
Classifying the books	200
Preparation of manuscript cards, setting up 'Stripdex' catalogue, labelling, etc.	120
	£320

Acknowledgment

The author is indebted to the Council of The Institution for permission to present this paper, and to the Secretary of The Institution for his helpful advice regarding its preparation.

SYMPOSIUM ON MICROPHOTOGRAPHY FROM THE USER'S POINT OF VIEW

London Meeting, 16th February, 1949

(*Reported*)

IN the absence of Miss Ditmas the chair was taken by Mr. J. E. Wright. Formal papers were not read, but three speakers contributed their observations on microfilm apparatus now available to the librarian. A specimen of the German Mikrophot reader was on view and there was a display of photographs of the Kodak Library Reader, Model A.H., the Ediswan Microfilm Reader, and the B.K. Microfilm Reader, Model II. (Names and addresses of the manufacturers and some other notes will be found on p. 37.)

The first speaker was Mr. H. Wilson, who described the apparatus in use at the Central Medical Library Bureau of the Royal Society of Medicine. These included the Thomson-Houston camera and reader which operated on the French system of the ten-page strip.[1]

Mr. Wilson was followed by Mrs. L. Moholy who, commenting on the A.E.G. reading machine exhibited at the meeting, said it was one of several makes now being encouraged in Germany. All of these were designed to serve as many uses as possible, the main idea being that long lengths, short lengths (strips) and flat films (fiches) should all be readable in one instrument. This was to be accomplished by an interchange of spools and frames, and the availability of different lenses to allow adjustment of magnification in keeping with the reduction previously used in the copying process. Efforts to provide these facilities had also been made in Great Britain and France, and machines had been designed on different price levels. The approximate average price of German machines was between 350 and 400 DM.

To make instruments adjustable and films interchangeable was a very real problem which had to be faced ; and recent developments had shown that it was more urgent than ever. It was no longer possible to think in terms of 100-foot lengths only—as some were doing in the first year of the war, when microfilms were mainly used for protection and preservation. Microfilm had in the meantime established itself as an indispensable means of disseminating scientific information, and the use of short lengths—originally recommended by Dr. Sayce—has been widely adopted for subject matter of up to ten pages in length. Neither the individual strip, nor the large unit of a few hundred pages, presented any major difficulty. It was the length between these which gave users a headache and which raised divergencies of opinion. Attempts to solve these difficulties had been made by many institutions; some (e.g. the Royal Society of Medicine) were in favour of cutting a long length and re-assembling it in folders; others had found it more convenient to copy several strips on to one or more pieces of flat film, thus reducing the number of pieces being handled. This had been done to a considerable extent in France and was the original version of what was now called the 'fiche'.

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[1] Described by H. E. Wilson in his article " The ten-page strip ", *Report of the 17th Conference of the International Federation for Documentation,* 1947, Vol. 1, pp. 83–4.

A prototype camera for producing flat films and a hand-made model of a reader to examine them were designed in Britain during the war by Dr. Edgar Schuster, of the Medical Research Council; but neither of the two instruments ever reached production stage. In the meantime, microfilms in rows on standard (D.I.N.) sizes of film had made good headway in Germany, and various kinds of reading matter were now being issued in this form. The reduction ratio used for these purposes varied with the number of pages to be accommodated on a film and with the ultimate purposes which a particular film was destined to serve, high reduction being required for some and low reduction for others. A great deal of attention had lately been given to low reduction matter readable by means of special magnifying glasses, without more elaborate apparatus. During her visit to Germany as an official delegate of the Library Association to the Conference of the Deutsche Gesellschaft fur Dokumentation in December, 1948, Mrs. Moholy had seen samples of work showing new applications of microphotography which were very encouraging. Her personal opinion was that the use of flat film (fiche) was going to increase, for there were many tasks for which it was better suited than any other of the existing methods.

Mrs. Moholy concluded her talk by saying, 'How then, may one ask, are we to distinguish and to master all these variations—these shapes and formats, sizes and standards, ratios and proportions, and the terms to cover them all? Here, I submit, lies our main problem to-day, and I have no hesitation in saying that it is a problem of great importance, of great potential consequence, and therefore of very great urgency.

'There is no need now, as there was a few years ago, to ask whether microphotography can be useful and whether it is acceptable to libraries. I think you will agree with me that it has been accepted and that it has come to stay, for a long time at any rate. The question we are asking ourselves now is: how can we cope with the many possibilities which are offered to us by inventors, designers and manufacturers? We must be on our guard lest we be overwhelmed by an *embarras de richesse* or driven to rash decisions. Instead, we must try to steer a middle course, we must learn to see, to examine and to judge, and this will enable us to choose for ourselves, or failing a satisfactory answer, to state our requirements.

'I presume we all share the view that microphotography will only reach its ultimate aim if its methods are sufficiently elastic to serve a great variety of uses, and sufficiently adjustable to give new scope to our work and to allow exchanges on all possible levels, individual, institutional, national and international. To achieve this is partly a technical problem, and partly—perhaps I should say largely—it is one of organization and administration; and it is in these fields in particular that our responsibilities lie if microphotography in libraries is to fulfil what it undoubtedly holds for us in the near future.'

At this point Mr. Wright drew attention to the displayed photographs of the Microdoc reader which had been developed by Mr. Cordonnier in France. The desk model, which occupied a space 120 × 210 mm., had been designed primarily for 'fiches' (105 × 150 mm.) but could take 35 mm. film. Attachments could be fitted to allow it to project on the ceiling or wall in ordinary light, or on to a larger screen in a darkened room. It could also be adapted for tracing in drawing offices. Four different lenses were supplied. A pocket model was also available.[2]

The symposium was closed by Mr. H. R. Verry whose remarks, in abridged form, are given below :—

'I have been asked to discuss with you the question of microfilm readers in this country. The task is easy, since we are limited to approximately five machines, some of which I feel have not yet been fully developed and none of which, to my mind, could be considered to have reached finality in design.

'In discussing readers I think it is quite fair to state that the design of these machines has always lagged behind that of the camera. Far more thought has been given to the taking of the picture than to the projecting of it.

'I regard this as unfortunate. To be of real value microfilming requires both these instruments to be of perfect precision. We must first produce a faultless negative and secondly, that negative must be projected to a reasonable size, clear and sharp without eye strain, on a machine fitted with controls that are simple and convenient to operate.

'Recently I was asked to explain why microfilming had not been undertaken and encouraged more in Government Departments. My view was that having no very effective readers available in this country and no dollars to buy ones from abroad, I felt that the time was inappropriate. The process stands or falls by the quality of the readers available. With the introduction of some readers which are far more satisfactory, we are now prepared to encourage the process in all its possibilities.

'I would not be bold enough to say that the new readers are entirely satisfactory. I regret to say that I am already growing critical. I should like to add that I do feel it essential that at these meetings we should readily air our views on what we want for the future. If this country is to be well catered for in microfilming, it is essential that everyone who has some practical knowledge and experience of the requirements should make it known and thus encourage the manufacturers to develop the best apparatus available.

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[2] Further information on page 38.

'It may be an advantage for me to state my views on what I consider are the essentials of a good reader: you will be able at the same time to measure your own requirements against mine.

(1) The first requirement of a good reader is that it must project a clear and sharp image free from blur and what is technically known as a hot spot. There is nothing more annoying than a bright circle of light shining in the eyes, and it can produce a fearful headache, particularly if positive film is being used. A reader must be usable over long periods. Freedom from glare should be an essential feature of all readers.

(2) The position of the final image is a far more controversial matter. Some may prefer to read the image upright as in the Kodak and the Watson readers, and some will prefer the image horizontal, as in the French, the Ediswan and the Wray readers. The main difference, of course, is that one type uses a translucent screen and the other an opaque one.

(3) The instrument should not require a darkened room.

(4) The controls should be conveniently placed so that they may be operated without rising from the chair. This may sound elementary, but those who have had experience with English readers during or before the war know how inconveniently those controls could be placed.

(5) The question of magnification is also one on which there may be differences of opinion. It is, perhaps, safe to say simply that it should be reasonably large and if possible variable. Alternative lenses are available for some readers, particularly the French and the Ediswan. It would be ideal if someone would invent a zooming lens such as is used in the film industry. This lens varies its focus and keeps the image always sharp during the variation. The American Recordak has a magnifying front which is tantamount to this.

Another problem which I feel has not yet been adequately faced is the projection of all types of film. Most of our readers will project both 16 mm. and 35 mm. perforated or non-perforated film, but as far as I know no machines have been fitted with masks to avoid the glare of light on the screen when anything but non-perforated film is used. Zooming lenses, of course, would avoid by projection a glare from the edge of the film.

(6) A requirement of importance to some is the ability to produce bromide prints.

'Finally, the type of reader we require undoubtedly depends upon our filing system. We have three methods, reel, strip and "microfiche", and it is my considered opinion that no reader in this country adequately caters for all. I understand that consideration is being given to this matter. If you use reels for extracting data from single frames set at intervals on the film I feel the reader must be quick in action and motorized if possible. In one British machine a hand-wind is being fitted, but I feel that when large reels are used the gearing should be high to enable the film to be passed quickly through the gate. The Americans have motorized their machines. They advertise "from file to film in 60 seconds". From the limited experience I have had with motorized viewers I have a sneaking regard for them and personally I feel that a reader being used regularly on reel projection would be more useful if mechanically driven. As far as we in the Government can assess our requirements, we feel that no one method of filing will be entirely satisfactory and therefore a reader, to be of full value, should be able to take all types of film. This is particularly so where only one machine is available in a department or where readers are supplied for the use of the general public.'

NOTES ON MICROFILM READERS

(Appendix to the above)

This is not an exhaustive list of microfilm viewers and does not attempt to cover the American models; information on these can be obtained from the following articles: 'Microfilm reading machines', by D. H. Litchfield and M. A. Bennett, *Special Libraries*, Vol. 34, Nos. 1–5, 7, January–June and September, 1943; 'New microfilm reading machines', by Mary A. Bennett, *College and Research Libraries*, Vol. 8, No. 3, Pt. I, July, 1947.

Great Britain

(1) Kodak Library Reader, Model A.H.
Made by Recordak Division of Kodak Ltd.,
Adelaide House, London Bridge, London, E.C.4.
Magnification (standard) = 12. Translucent screen 18 × 18 in. Requires table space 2 ft. square. Illumination by 200-watt lamp. Differs chiefly from American Recordak C model by having a magnifying glass fitted instead of the continuous magnification of the C model: also it is fitted with shields permitting use in a non-darkened room. Film control is by one handle, not by two separately geared, which moves the head in any direction sideways, but for viewing upright, the full use of the 360° turn, it is necessary to stand and adjust by hand. The model has been designed for all types of film except 'fiches'. Strip film must be used on top of the machine.

(2) Ediswan Microfilm Reader,
Made by Edison Swan Electrical Co., Ltd.,
155 Charing Cross Road, London, W.C.2.
Magnification (standard) = 12.5 in Model 1 and 20 in Model 2. Opaque screen lying at an angle of approximately 30° from the horizontal, 300 mm. square. Illumination by 50-watt lamp. A special hood permits use in a brightly lit room. Full film control at table level. The reader is a version of the French Thomson-Houston model and has been designed specially for strip film although it is able to use also reels and 'fiches'.

(3) Watson No. 3 Library Reader (not illustrated at the meeting).
Made by W. Watson & Sons, Ltd.,
313 High Holborn, London, W.C.1.
Magnification = 12. Translucent screen 18 in. square. Illumination by 48-watt lamp.

(4) B.K. Microfilm Reader, Model II.
Made by Wray (Optical Works), Ltd.,
Bromley, Kent.
Magnification = 10. Screen 17 in. square. Illumination by 60-watt lamp. Direct projection from top of viewing chamber; reels are also on top of the machine and are operated by milled knobs. The head rotates so that copies may be read in any normal position.

France

'Cordonnier' microreader (known as Microdoc):
Made by Microdoc,
Siege Social : Auneuil (Oise), France.
Agent for British Empire (except Canada) : Industrial Studies & Investigations, Ltd., 43 Wellington Square, Hastings, Sussex.
Adaptable for either direct reading on 14 or 28 in. screen, for wall projection up to 70 × 100 in., and for tracing. Will take both 'fiches' or 35 mm. film in rolls. There is also a wallet-size reader called the 'Microfiscope', which can be used for consultation of documents while travelling, etc.

Thomson-Houston Reader.
Made by Cie Française Thomson-Houston,
37 rue de Vouillé, Paris, 15e, France.
(See note on Ediswan reader.)

Germany

Mikrophot.
Made by Mikrophot Kommandit-Gesellschaft,
Berlin-Grunewald, Hohenzollerndamm 150.
A portable reader, folding down into a case 11 × 7½ × 3½ in., chiefly designed for flat film 90 × 120 mm. but believed to be adaptable for strip film.

E. M. R. DITMAS.

SYMPOSIUM ON METHODS OF GROUPING SPECIALIST LIBRARY SERVICES

London Meeting, 23rd March, 1949

The Speakers were introduced by the Chairman, Mr. J. E. Wright

1. SERVICE TO MEDICAL LIBRARIES

By Geoffrey R. Edwards
Royal Society of Medicine

(Reported)

MR. EDWARDS pointed out the vast differences of services between special and other libraries and the difficulties of co-operation. Even between special libraries working in the same field the services varied considerably, their development being influenced by the wishes of the financially supporting members and the initiative of the permanent officials. Between two special libraries there might be all the differences in activity between a mausoleum and Piccadilly Circus. Mr. Edwards could but deplore the former, and knew that those present would only wish to hear about the latter—the special library giving fair service.

The library of the Royal Society of Medicine was supported by the annual subscriptions of its fellows. Candidates for election as fellows need have no high-ranking medical qualifications; enthusiasm and need of the Society's services were all that was needed. For non-members a small room for the use of sponsored visitors had been provided. The library was open for twelve hours every day, except Bank Holidays, and provided service for at least 47,000 readers who were fellows, and 1,100 visitors per year. Fellows, from all over the world, numbered 9,000. Last year 53,800 books were loaned, 28,000 parcels of books despatched to addresses in the British Isles, and 2,100 photo-copies, 1,900 lists of references, and 330 translations of foreign abstracts in nine European languages were prepared. Mr. Edwards estimated that these figures would increase in the current year. The library, comprising reference and lending sections, contained upwards of 150,000 volumes and took 1,300 current periodicals. 9,000 volumes were always out on loan. To achieve this service it was, of course, necessary to stock several copies (many unbound) of most titles. Photo-copies and microfilm were used when necessary.

With the aid of a Rockefeller grant the library was operating a scheme to rehabilitate 150 medical libraries over areas affected by the war from Reykjavik to the Rand and Manilla across Europe to Mukden. Each library had been presented with a microfilm reader and, with the co-operation of the publishers, was being presented with positive microfilm copies of out-of-print medical journals. 8,000 complete volumes of such journals had already been despatched and another 4,000–5,000 had yet to be produced. This rehabilitation service would cease with the end of the Rockefeller grant, but it was planned that the photographic unit would then commence a long-term policy of interchange of information between scientific institutions. The negatives of out-of-print volumes of journals would be held, and negotiations were at present in progress whereby it was hoped that publishers would take advantage of these negatives to provide copies of otherwise out-of-print volumes through their normal sales channels.

2. THE INTERCHANGE OF TECHNICAL PUBLICATIONS IN SHEFFIELD

BY J. P. LAMB
Sheffield City Libraries

THE idea which ultimately found expression in the creation of the Organization for the Interchange of Technical Publications in Sheffield was first suggested in a paper which I read to the 9th Annual Conference of ASLIB in 1932 on 'The Public Library as an aid to industry and research', in the course of which the following remarks were made :—

> 'In Sheffield, where many firms have large research staffs, there are frequent requests for periodicals on technical subjects. Although a wide range of technical journals is stocked in our Commercial and Technical Department, it is astonishing how many of these requests have to be met by loan through the National Central Library. This leads to an interesting suggestion. Most Works Libraries carry a fairly extensive selection of technical journals dealing with their products and methods, many of them of the very specialized type. There would be obvious advantages in a pooling of these periodicals with the Public Library as a medium of exchange. The machinery required for such a pool need only be a simple card index at the Public Library of all the files of scientific and technical periodicals in the area, whether at Special Libraries or Works Libraries—a local miniature of the extremely valuable *World List*, which we all find an indispensable tool.'

Later it seemed reasonable to attempt to find out how far the idea was practicable and acceptable, and the libraries and the largest firms in Sheffield were invited to send representatives to a meeting in the Central Library on 12 December, 1932, to discuss the matter. It was presided over by the then Chairman of the Libraries Committee, Mr. (now Sir) Samuel Osborn, the head of a great steel firm with a long and honourable reputation in the city. Dr. R. S. Hutton attended as a representative of ASLIB, and his presence and advice were of great value.

Before dealing with the actual organization, it may be helpful if the position of the public library services in relation to industry in Sheffield is first explained.

In 1921, the Sheffield Public Libraries were probably the worst in the country; the stock of technical books was small and largely out of date; the service was inept; the staff largely untrained; with the natural result that the idea of the Libraries becoming an aid to industry had no foundation in experience. The immense progress the Libraries had made by 1932 was only slowly being recognized.

On the other hand, except for a few progressive firms, there was a tendency in industry to discount the value of technical information and to rely on the methods on which local industry had built up its reputation in the past. These two considerations made it necessary for the first meeting to be handled carefully and tactfully, and the fact that success was achieved is a tribute both to the prestige, knowledge and skill of the Chairman, and the persuasive powers of certain representatives of the Committee.

It is probably true to say that at this early stage many of the industrial representatives came to the meeting believing that the Library needed help from industry, and they very charmingly offered it; it was, at the moment, almost unthinkable that the Library could help industry. The fact that the service had developed enormously since 1921 had hardly been noticed; and the knowledge that the Commercial and Technical Library had ceased to be a room in which a few out-of-date books and periodicals were stored, and had become instead an alert and effective centre for a vast range of information affecting industrial practice and research, had not yet penetrated the great industrial establishments.

Certain simple decisions were made at this meeting. It was agreed in principle that the idea of pooling resources was a good one. Dr. Hutton wisely pointed out that whereas there were in existence schemes for the exchange of material between Libraries, this was the first occasion on which it was suggested that co-operation should not be between Libraries only, but between manufacturers and Libraries. It was generally recognized that the scheme would only have value if it helped to speed up the supply of information urgently wanted. This implied the loan of books from the City Libraries for use in the laboratories of the firms themselves.

A Sub-committee was appointed to work out the details; it met on 6 January, 1933, and made the following decisions:—

(1) The Public Library should suspend its non-loan rules in favour of the members of the Organization, and should be prepared to lend books and other material (with certain obvious exceptions) for use at the actual firms' premises, but not to individuals for private use.
(2) A Union list of books and of periodicals should be made.
(3) A memorandum describing the scheme and the proposals should be prepared and issued to all prospective members.

The memorandum was, in fact, circulated on 30 January, 1933. Some of the points mentioned in it are given below.

'The purpose of the scheme is to pool the resources of the whole of the city by forming a central index, and by interchanging specialist matter between the various organizations which join the scheme. Such an interchange should be based on the following principles:—

(1) Agreement between the organizations to lend their books to one another.
(2) A list of all the available literature should be kept at a central point.
(3) The natural place for this central catalogue should be the Science and Technology Department of the City Libraries, whose staff would compile it and keep it current and also provide an Information Service.'

It was pointed out that the advantages to firms which joined the scheme would be :—

(1) Saving of time, since it would be possible to obtain books and periodicals needed within a few hours of the need arising.
(2) Saving of cost—of postage and in many cases of buying books which now had to be obtained for quite isolated needs.
(3) It would give easy access to a wide range of literature.
(4) Members would have the privilege of borrowing books, etc., from the Science and Technology Library.

It was also made clear that it would be quite impracticable, and probably unnecessary, for the Libraries which were members of the scheme, and some of the firms which had large libraries, to make additional catalogue entries of all the books they possessed. So far as the special libraries were concerned, their nature made it easy to decide whether they would be likely to have a particular book on stock, and in the case of the large works' libraries, it was probable that the greater part of their stock would merely duplicate that in the City Science and Technology Library. The position as regards periodicals was fundamentally different, and it would be necessary to create a complete Union List of all periodicals and their files.

Firms who wished to participate in the scheme would be asked :—

(*a*) To supply a complete list of periodicals and files in their possession on slips circulated by the Science and Technology Library.
(*b*) As regards books, the smaller firms to give particulars of all the books they have, and larger firms to give particulars of books dealing with exceptional subjects.
(*c*) To ensure the accuracy of the Union Lists by sending to the Libraries at regular intervals lists of additions or changes.
(*d*) No member would be expected to lend current periodicals or directories, or other quick-reference books in constant use.

The procedure suggested was that each member wishing to obtain a particular book or periodical would enquire about it at the Science and Technology Department, whose staff would ascertain from the Union catalogue where the required work was on stock and notify the enquirer accordingly. Borrowing would then be done directly between the firms or libraries concerned, and the borrower would both collect and return the book or periodical.

It may be convenient to mention here that a variation was later introduced to cover confidential enquiries. It was arranged in such cases for the lender to send the material to the Science and Technology Library from which the enquirer would borrow it, so that the identity of the borrower would not be known to the lender. This special arrangement has fallen into disuse during the past few years owing to the changed attitude towards research since the war.

A further meeting was held on 8 February, 1933, when it was formally moved and agreed that the scheme be adopted and the Organization for the Interchange of Technical Publications in Sheffield officially came into being.

At its inception, the Organization comprised two libraries, four libraries attached to institutions, and twelve firms.

The rules then laid down, and subsequently amended, are as follows :—

(1) Borrowing privileges are restricted to members.
(2) All requests are to be made through the Science and Technology Library.
(3) The period of loan is to be fixed by each member for its own books, and books must be returned within the stipulated period.
(4) Members who are persistently dilatory in returning books will, by agreement of the majority, be denied further use of the scheme.
(5) No books borrowed under the scheme may be used for home reading. Books will be lent to organizations, not individuals.
(6) Members will not be called upon to lend current periodicals, patents, directories, code books or quick-reference books in constant use.
(7) Where members find difficulty in providing messengers to obtain material from the Central Library, the items required will be sent by post providing the borrower pays postage both ways.
(8) Requests for loans must be signed by one of the two officials appointed by each firm to do so.

The following conditions, though not included in the rules, were operated by agreement :—

(*a*) Members must keep the Central Library informed of changes in books and periodicals.
(*b*) Membership of the Organization is limited to firms with a minimum of 50 books and 10 periodicals, save in exceptional circumstances.

As the work and value of the Organization became better known, there was a steady increase in its use and membership. To some extent it suffered from the disabilities of all such schemes. Some firms not in membership tried to obtain the advantages without accepting the liabilities, and condition (*b*) mentioned above was adopted in 1937 to deal with this difficulty. There was, too, the usual tendency on the part of some members to rely on it instead of providing material they needed regularly themselves, but this was not serious.

Its growth may be judged by the fact that it now has 30 members, comprising 6 Libraries and Societies and 24 firms, and by the accompanying figures of issues.

It will be seen that from the inception of the scheme, the whole of the members, meeting annually, decided policy ; but an Executive Committee of five was elected to deal with any problems that might arise in the running of the organization. It became the practice for the Executive Committee to refer points of principle to the Annual Meeting. The Annual Meeting alone was competent to decide on new applications for membership.

As time went on the system became routine, though various minor adjustments were made from time to time. There can be no doubt that many more records were exchanged than the official figures of loans show, since it is known that once members knew the location of certain material, they went direct to the lender without notifying the Science and Technology Library.

Year	*Borrowed from City Library*	*Borrowed by City Library from other members*	*Interchanged between other members (excluding City Library)*	*Total*
1933–34	77	16	7	100
1934–35	157	14	25	196
1935–36	194	20	43	257
1936–37	461	62	52	575
1937–38	636	42	59	737
1938–39	684	44	93	821
1939–40	742	41	107	890
1940–41	934	49	82	1,065
1941–42	1,167	36	63	1,266
1942–43	1,033	24	44	1,101
1943–44	1,199	34	45	1,278
1944–45	1,189	38	21	1,248
1945–46	1,249	52	14	1,315
1946–47	1,330	31	98	1,459
1947–48	1,252	16	112	1,380

One or two matters outside the range of the actual interchange organization, which were deemed to be of interest to members, were discussed even before the war. For example, one member suggested that the cost of translations might be pooled. Arrangements were accordingly made whereby any firm which desired to have a translation made notified the Science and Technology Library of the article and the approximate cost, and all members were circularized to find out whether or not they wished to share the cost. Eight translations were actually made under this plan—five German, two French and one Russian—but the arrangement fell into disuse during the war. Another suggestion resulted in files of important periodicals being deposited in the Central Library for general use.

Once the Organization was running smoothly, there was little for either the Executive Committee or the Annual Meeting to do. During the war, no Annual Meeting was held, and the Executive Committee only rarely met. At the first Annual Meeting after the war, however, there was a notable change in the type of representative who attended. In the first few years of the scheme's operation, research workers themselves served on the Committee, but as more and more firms began to take the provision of technical information more seriously and to treat it as a specialized activity, they were gradually replaced by librarians and information officers. It had always been the practice to ask members to submit items for the agenda of the Annual Meeting. As time went on these items took on a different form, being more and more concerned with the common problems of the firms in tracking sources of technical information, rather than the organization of the Interchange Scheme itself. It was noted, too, that the meetings provided a most useful medium by which the Technical Information Officers and Librarians could exchange views and experiences. From this point of view the Annual Meetings became extremely valuable and informative.

The following are examples of the matters which were placed on the agenda and on which action was taken :—

1946 Methods of tracing foreign patents on specific subjects.
,, The local organization of the Northern Branch Meeting of ASLIB in Sheffield in March, 1946.
,, Urged (through ASLIB) the Patent Office to bring up to date war arrears of patent indexes and abridgments.

1947 Resolution to B.o.T. urging T.I.D.U. (Technical Information and Document Unit) to make the files of German documents accessible by indexing and abstracting them on similar lines to the work of the American Air Technical Intelligence, and by making translations of the more important ones.
Also asked T.I.D.U. to deposit files of microfilms of German machine drawings in the leading technical libraries in the country.
,, Arranged direct loan of books from the Science Museum Library to Organization instead of through the National Central Library.

1948 The Union List of Periodicals was revised.
,, The trade catalogues in the Commercial Library were completely revised as a result of a suggestion of a member.
,, A large selection of photo-copies of Declassified Reports on Atomic Energy was purchased.
,, Members were invited to suggest which of the Research Bibliographies issued during the war should be brought up to date. 166 requests were received.

1949 The Research Associations were asked to consider undertaking the work of indexing, abstracting and translating T.I.D.U. German documents.
,, Suitable Sheffield firms were circularized asking whether they would be willing to give details of translations made by them for inclusion in a Union List of Translations in Sheffield.
,, Details of the UNESCO coupon scheme were circulated to members.
,, A complete set of Sheffield Technical Library Research Bibliographies was offered to Special Libraries Association of America in exchange for set of theirs.

An important decision about the administrative routine of the Organization has recently been made. In order to prevent misuse, it had early been found necessary to insist on requests for books, etc., being signed by one of not more than two persons on any one firm whose specimen signatures were held at the Science and Technology Library. Owing to the delays in the operation of this routine in large firms, it was decided that instead of applications being made by letter, a requisition book should be supplied to each firm on which all requests for loans should be made.

The requisition form in these books is a 'follow through' slip which provides an adequate check both on the request for, and the return of, books and periodicals. At the conclusion of the transaction the form is filed by the member who originally made the enquiry. The rules governing loan are printed on the back of each form. At the end of the year members are asked to send all the completed forms to the Science and Technology Library, whose staff will analyse them and compile the official records of the use of the Organization during the year. As this new system was only begun on 1 April of this year, it is not possible to express any opinion on its usefulness.

The measure of the value of the Organization is reflected in the use made of it; and the figures of membership and issues appear to prove that this pooling of sources of information has received growing appreciation. Not all members use it to the same degree. Certain of the larger firms make several requests daily; one of them sends a list of requirements as a daily regular routine, and the items needed are collected the same morning. Other members—mainly smaller firms, working on specialized products—use it rarely, but their continued membership suggests that on these occasions the Organization can be exceedingly useful to them.

It will be noticed that all the work and the costs are borne by the City Libraries, and an analysis of them would undoubtedly show that both are considerable. The question naturally arises: 'What advantages does the Library obtain from a specialized service that by its nature can only be of benefit to a comparatively small, though very important, section of the city's life?' I think this question can be answered satisfactorily as follows:—

Though by far the largest proportion of material exchanged comes from the Science and Technology Library, a certain number of specialist items are available from members for advanced students using the library in the ordinary way. The close contacts made by the staff of the library with industry enables them to give good service to those engaged in production in a more direct and effective way than would be possible by any other means. The value of these contacts is considerable. There is always a danger of the librarian bringing to his work a purely bookish approach, and the knowledge he gains of the practical problems which industrialists have to face helps him to develop a right sense of values, He finds it most useful, too, to be able to ask for the advice of an Information Officer or Librarian at one of the great industrial establishments, who in turn can seek the help of the specialists employed there. He can keep abreast of the changing needs of industry; he often receives valuable suggestions of new material for the library's stock; and sometimes, when no printed material of any kind is available, some research worker can help to answer an enquiry which could not be satisfied from any other source. In the preparation of research bibliographies, too, it is useful to be able to refer a doubtful point to some authority whose special knowledge must, in the nature of things, be greater than that of even the most intelligent and accomplished librarian, whose field is too wide for him to master all the details of the immense range of interests he has to serve.

The representatives of the firms, on their part, are now able to meet regularly to discuss matters of common concern. During the last few years many points have arisen during the discussions which were not on the agenda, but which enabled members to draw on the experience of their colleagues. These regular contacts between information officers and librarians engaged in widely varying aspects of industry and information work have, as has been shown, great practical value; but not the least of their advantages is that they help to broaden the minds and interests of those who make them by leading them to realize that no one industry or firm has a monopoly of difficulties, and that the problems of one are often the problems of all.

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PROVINCIAL MEETINGS, 1948–9

CONTENTS

PAGE
PREFACE 49

NEWCASTLE UPON TYNE
7th December, 1948

INTELLIGENCE—SOME FUNDAMENTAL PRINCIPLES.
DR. V. E. PARKE (Intelligence Officer, Imperial Chemical Industries, Ltd., Billingham Division) . . . . . . (*Summary*) 51
INDUSTRIAL, TECHNICAL AND COMMERCIAL INFORMATION, THE CONTRIBUTION OF THE PUBLIC LIBRARY.
E. AUSTIN HINTON (City Librarian, Newcastle upon Tyne) . . 57
INFORMATION SERVICE · THE CONTRIBUTION OF THE UNIVERSITY.
R. O. MACKENNA (Librarian, King's College, Newcastle upon Tyne). 67
THE PROFESSIONAL SOCIETIES' CONTRIBUTION · THE LIBRARY OF THE NORTH EAST COAST INSTITUTION.
T. S. NICOL (Secretary of the Institution) 71
INTER-LIBRARY CO-OPERATION: THE REGIONAL LIBRARY BUREAU.
MISS JANETTA G. SCURFIELD, F.L.A. (Northern Regional Library Bureau) 77

EDINBURGH
6th May, 1949

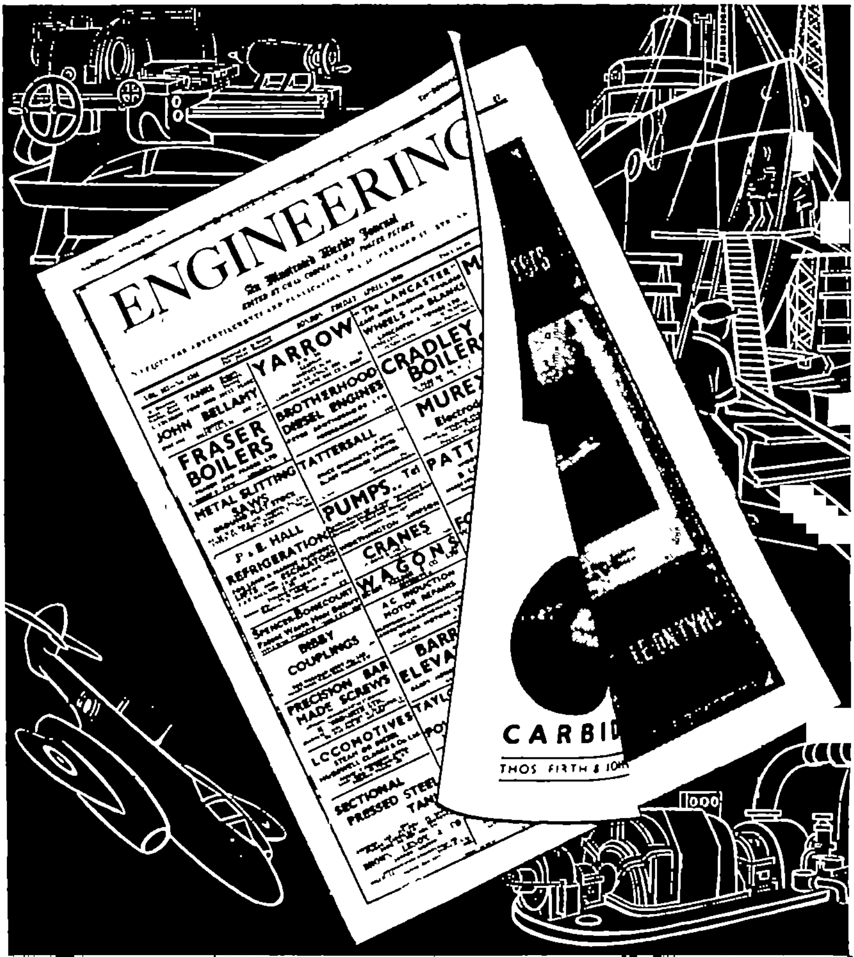
LIBRARY CO-OPERATION IN SCOTLAND.
L. W. SHARP, M.A., PH.D. (Librarian, Edinburgh University) (*Summary*) 81
PROBLEMS OF AN INDUSTRIAL LIBRARIAN.
D. G. BROWN, PH.D., A.R.I.C. (Imperial Chemical Industries, Ltd., Nobel Division) 87
THE PROBLEMS OF THE TECHNICAL SOCIETY LIBRARY.
P. W. THOMAS, B.SC.(ENG.), A.M.I.C.E., F.C.I.S. (Institution of Engineers and Shipbuilders in Scotland) . . . . . . (*Summary*) 91

MANCHESTER
28th January, 1949

THE TRAINING OF THE INFORMATION OFFICER.
(Discussion, reported) 93

LIVERPOOL
9th December, 1949

THE ORGANIZATION OF WORKS VISITS.
F. C. JENNINGS (Dunlop Rubber Co., Ltd.) . . . . (*Summary*) 99



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ASLIB PROCEEDINGS

Volume 2 May, 1950 Number 2

PREFACE

THE Newcastle upon Tyne conference on 7th December, 1948, was held under the auspices of the Northern Branch of Aslib, but was organized largely by a local committee under the chairmanship of Mr. E. Austin Hinton, City Librarian, Newcastle upon Tyne, and with the help of Mr. M. G. Cahill-Byrne, of Messrs. Vickers-Armstrongs, Ltd., who acted as Hon. Secretary. Chairman of the conference was Mr. R. Trevor Jenkins, Technical Manager of Messrs. Vickers-Armstrongs, Ltd., and the opening ceremony was performed by the Right Honourable the Lord Mayor of Newcastle upon Tyne, Alderman T. McCutcheon, who subsequently entertained many of the delegates to luncheon at the Mansion House. Meetings were held in the lecture hall of the North of England Institute of Mining and Mechanical Engineers, and the Institute kindly provided tea in their library. Space was also given for a small exhibition of Aslib publications and of other reference literature likely to be of assistance to librarians in industrial concerns. The conference was on the general theme of the value of an organized information service to industry and was designed to interest non-members of Aslib, the last three forming a Symposium on Information Service. The five papers presented at the conference are printed on pp. 51–80. At the close of the meeting Mr. R. Brightman, Chairman of the Northern Branch, spoke of its work, and Miss E. M. R. Ditmas, Director of Aslib, described the ways in which it could serve the industrial librarian.

The Edinburgh conference on 6th May, 1949, was also part of the programme of activities of the Northern Branch, but was specifically organized in the hope that the outcome might be a decision to form a separate Scottish Branch for the benefit of Aslib members in Scotland. This was, in fact, the happy result, and the local Steering Committee which, with Mr. H. Corteen as Chairman and Mrs. Margaret Spence as Hon. Secretary, had organized the conference was asked to arrange for the appointment of an Interim Committee which could carry out the formalities necessary for the inauguration of the new Branch.

The conference was held in the rooms of the Royal Society of Edinburgh and was opened by Sir John I. Falconer, former Lord Provost. The Chairman throughout the sessions was Mr. Douglas A. Foulis, President of the Edinburgh Chamber of Commerce. Three papers were read in the morning, accounts of which will be found on pp. 81–92. After luncheon at the Royal Hotel, the delegates reassembled to hear Miss E. M. R. Ditmas, Director of Aslib, speak on its work. She was followed by the Chairman of the Northern Branch, Mr. R. Brightman, who explained the structure of the branches and their relation to the membership as a whole. An interval for tea, kindly provided by the Royal Society, allowed delegates to argue informally the pros and cons of a Scottish Branch, a topic which was then formally discussed by the meeting. A motion that there be formed a Scottish Branch of Aslib was proposed and seconded and carried *nem. con.*, and the Steering Committee was asked to act upon it. The Interim Committee was subsequently appointed by postal ballot: Dr. D. G. Brown was elected Chairman, Mr. C. J. Shimmins accepted the office of Hon. Treasurer, and Mrs. Margaret Spence continued her valuable services as Hon. Secretary.

The training of information officers was the subject of a meeting organized by the Northern Branch in Manchester on 28th January, 1949. The meeting was the outcome of the Symposium on the Training of the Information Officer at the 23rd Annual Conference of Aslib, held in September, 1948. The Manchester meeting was reported fairly fully in *Aslib Information* for March, 1949, but, for the sake of the continuity of the record, the account of the discussion is reprinted in this issue of the *Proceedings*, together with extracts from Mr. Raine's introductory paper.

Sir Charles G. Renold presided over a meeting of the Northern Branch held at the Central Library, Manchester, on 28th October, 1949, when Mr. A. D. Butchart, of the Manchester Joint Research Council, presented a paper on 'Information work in the small firm'. He was followed by Mr. E. N. Simons, who spoke on 'How the manufacturer can help the librarian', with special reference to trade literature. A report of the meeting was printed in *Aslib Information* for November, 1949.

The Northern Branch's third ordinary meeting during 1949 was held in the Hornby Library, Liverpool, on 9th December, when talks were given by Mr. F. C. Jennings on 'The organization of works visits' and by Mr. E. N. Simons on 'The preparation of technical literature'. A summary of Mr. Jennings's paper is printed on pp. 99–101.

INTELLIGENCE—SOME FUNDAMENTAL PRINCIPLES

By Dr. V. E. Parke

Intelligence Officer, Imperial Chemical Industries, Ltd., Billingham Division

Newcastle upon Tyne Conference, 7th December, 1948

(*Summary*)

1. *Scope and Size*

THERE is no official definition of intelligence, but it may be conveniently said that 'the function of intelligence is to find, to obtain, to assess, to store, and to make available, all information, published or not, of value to the institution concerned or to its collaborators'.

This definition may seem formidable to any who are beginners in intelligence work, but a short examination will show that it is not so. For it only describes all the steps in any complete act of intelligence and therefore a section working according to it can be of any size whatsoever. Indeed, an intelligence section can be as small or as large as the institution requires and can be started up or closed down at any time. There is, moreover, no official method of running a section; it can be suited to the requirements of the institution. Most activities have one or more journals devoted to their fields; every institution has a certain amount of technical correspondence; it is easy to find the common reference books. The material for making a beginning with intelligence work is therefore ready to hand in most cases. Here lies the first suggestion that this conference offers to any who may be held back from intelligence work by the thought of initial difficulties.

If it is objected that this description does not involve any difference between the routine of an ordinary office and the work of an intelligence section, the answer is quite simple. On the one hand, it is true that successful intelligence sections, particularly in industry, have begun on a small and tentative scale in the form of a few books and papers in charge of a clerk or secretary. On the other hand, there is the fundamental fact that an office characteristically awaits the receipt of material given to it and gives that material out on demand, whereas an intelligence section tries to understand the processes, needs, ideas, etc., of the institution, to see that all information bearing upon them is collected and to find opportunity to bring that information to the notice of those who may use it. The section often takes a leading part in insisting that information is properly written up for storage and use. In short, if a clerical office can be inward-turned and passive, an intelligence section ought to be outward-turned and aggressive.

It follows from this that there must be some technical knowledge, or subject knowledge, and experience behind an intelligence section even while it is small enough to be run by an unskilled person. Growth and development will be supervised and encouraged by the skilled superior and in time the control staff will either have to acquire adequate technical or subject knowledge, plus knowledge of intelligence work, or else will have to give place to others who have done so. It goes without saying, of course, that where an institution is already convinced of the value of intelligence work, it will usually do better to provide a properly qualified staff from the outset.

Once a section is safely launched and properly nourished it will grow in size and complexity as it rises to the measure of its opportunity. It may be worth while, therefore, to say a few words about a large-scale organization with a history of a quarter of a century, such as that at Billingham. The Billingham factory is one of the largest in the world dealing with heavy chemicals. It makes enough fertilizers to provide food for about 3½ million people continuously, in addition to its output of cement, petrol, acids and other chemicals. It consumes 3,000 tons of coal and it uses one million tons of cooling water per day. Its intelligence section now has about 40,000 private reports of research and other work of its own and other I.C.I. companies, and about 20,000 books and pamphlets. It takes in about 400 different periodicals, many in multiple copies, most of which it circulates to staff particularly interested. It also prepares and circulates among the staff a weekly bulletin of references from those periodicals related mainly, but not exclusively, to its technical interests. It takes special care to find out what is being published in the very wide field of Billingham interests and to see and (if approved) to acquire everything of value. It makes translations from a large number of languages and answers many questions on the very wide range of subjects that come up in the day-to-day work of the factory. It supervises the presentation of all non-routine reports to the management committees and so is in a position to know most of what is going on and to see that adequate records are made and handed in for safe keeping. This large and complex service has been built up over the years, not only by the activity of the section itself, but also by the friendly co-operation both of the Board and of the users.

2. *Value and Cost*

There is no simple method of estimating the value of these services comparable with methods of measuring output, efficiency or cost in a manufacturing process. What has to be looked for is the creation of a habit of mind. Staff come to realize that there is an enormous amount of information bearing upon any problem that may arise and that an effective intelligence service can produce such information for use. The effect is that no one need feel alone or helpless in face of a difficulty, but can be assured that in every case knowledge can be obtained, which, even if it does not give the complete solution, will almost certainly reduce the difficulty to manageable size. Putting it in another way, the value of an intelligence section rests in developing the habit of standing back from the job and appraising it critically. It can give encouragement and confidence in planning by giving knowledge applicable in present difficulties and suggestions for lines of future development.

The cost will, of course, vary with the amount of work to be done and there will very rarely be any item in the profit and loss account to set against it. It may therefore seem high, especially in the early years. But guidance can easily be obtained. An organization served by a good intelligence section will quickly recognize its value and the cost of sections in comparable organizations to one's own should not be difficult to find.

3. *Organization*

There is, of course, a great deal to be learnt about buying, borrowing, cataloguing, indexing, shelving, filing and similar items related to the mechanical side of intelligence work. It will not be necessary to discuss these here as there are many varieties and many sources of information, and the following papers will give a wealth of valuable detail. It should, however, be mentioned that the most important work of the section may well be to give encouragement to its users to come in for leisurely reading and discussion of their problems whether with one another or with the section staff. For this purpose the section should be attractive; it should be well laid out, comfortable, quiet and easy of access.

There are three centres of action for intelligence work, the head of the institution as a whole, the section itself, and its users; their part in the work can readily be described.

The head of the institution is responsible for deciding the scale of the work and allocating the finances. He will, therefore, require criteria of efficiency and will quickly adopt the obvious ones. He will expect the section to make few mistakes, such as obtaining unsuitable material in response to enquiries, buying useless material and giving inaccurate information. But these criteria are really superficial; any well-run section should soon be able to obtain nearly full marks. A much more appropriate and valuable criterion is the attitude of users in general to the section—the growth of the habit of referring to it and trusting it. This can only be gauged indirectly and over a period. The head of the institution must, therefore, be content at first to approve the section on the obvious lines, to allow it time to develop its value, to do all he can to back up its prestige in relation to its users, to use it, and above all, to respect it himself. Things are made specially difficult for a section leader when the head of the whole institution does not scrupulously respect the section's property and rules. This does not mean that the section is to be protected from criticism, but it does mean that its work is apt to be difficult to see and judge. For its greatest success it depends to an unusual degree on the co-operation of its clientele, which will be more readily given if the support of the head of the institution is strong and clear.

The section itself must be orderly and business-like in every sense. It must be friendly towards its users and active in serving their interests; it has to find out what these interests are, and to be ready to meet demands, sometimes even before they arise. It must, therefore, be knowledgeable, not only in the special field of its institution, but in a great many related fields. For example, at Billingham, although we are especially concerned with heavy chemicals, we have much material on the related subjects of mathematics, physics, metallurgy and all branches of engineering, as well as on the more remote fields of economics, law, industrial medicine and psychology. We have also many connections in the library world and can borrow (and lend too) widely.

Above all, the section must respect itself and insist on proper handling of its material by all its users.

The users in turn must respect the section and use it with public spirit; they must not immobilize its material by making unnecessary demands and they must be ready to prepare and hand in reports of their own work as well as to assist in the selection of purchasable material when called upon. Users often find it very difficult to specify their requirements and many are apt to ask questions in general terms when their requirements are quite specific. This practice is liable to produce unnecessary work for the section and irritation in the user. He has therefore to be ready to be questioned about his requests so that they may be more readily met, and he should do all he can to learn how the section works and to co-operate with it.

There must thus be very close collaboration between all the three authorities involved. This is an absolute condition of successful intelligence work anywhere.

4. *Staff*

There is as yet no simple way of specifying the qualifications for intelligence staff. In a small section one intelligence officer may have to be able to meet all requirements, but in a larger section one member of the staff may be specially knowledgeable in the subject field, another in languages, a third in intelligence technique. For the present it seems to be necessary to try to build up a team from the people available, and to give any necessary training and experience until they are able to cover all the requirements. In any case it can be said that all must be prepared to adopt the service attitude, to show patience, understanding, flexibility, orderliness and readiness to meet any request. As time goes on, the section will learn more of its institution's history, its ways of approach to problems, its general interests and the way to deal with individual members of its staff.

It is unnecessary to try to assess the relative importance of subject knowledge and intelligence technique. The important thing is to have as high qualifications as possible, to look for the flair for intelligence work (which cannot be assumed to be included in any formal qualification), and to encourage a successful staff to increase its qualifications along with its experience.

5. *Conclusion*

This introductory paper has been restricted to general principles as the later papers will discuss the problems in detail. It has attempted to show the nature of intelligence work and its value and how an intelligence section becomes an integral part of its parent institution. The justification of the whole business could hardly be put more neatly than it was in the Aslib quarterly, *Journal of Documentation*, March, 1948, p. 219 :—

'Sir Edward Appleton, Chairman of the British Commonwealth Scientific Official Conference, touched on the heart of the problem in his opening statement :—

> "The results of research which is now going on or which is just beginning will take time to accrue, but there is at the moment a vast amount of scientific knowledge which could have immediate application were it known to the men on the job. . . . It is scattered through many countries and through many Government departments. The problem is how it can best be tapped without setting up unwieldy machinery whose operation would demand an effort in man-power which we may not be able to afford. This seems to me to be the main problem which we shall have to consider in our session on information services." '

Vol. 2, No. 2 ASLIB PROCEEDINGS May 1950

INDUSTRIAL, TECHNICAL AND COMMERCIAL INFORMATION: THE CONTRIBUTION OF THE PUBLIC LIBRARY

By E. Austin Hinton
City Librarian, Newcastle upon Tyne

Newcastle upon Tyne Conference, 7th December, 1948

THE theme of this conference is the provision of necessary information for the industrialist, the technologist, and for the business man generally. Of the importance, the vital importance, of this subject there will be no question to-day. In the halcyon conditions of the pre-war world our supposedly characteristic British methods in industry and commerce were perhaps sufficient. Some conscious pride in the superior quality and finish of our products, and the comfortable wealth forthcoming from our overseas investments, permitted a relatively careless enjoyment by a creditor nation of a seller's market. In the very different circumstances in which, as a nation, we find ourselves to-day, our erstwhile light-hearted inattention to research, methods, and markets can only lead to disaster, to our complete financial, political, and social ruin. To say this is, of course, to state what is generally known and agreed; however much the unpalatable truth of it may be evaded by ostrich-like and fact-cushioning gratulations upon targets achieved or quotas exceeded. Government admonitions, the directives issued by production boards and working parties, the publications of manufacturing and trade associations—these all stress the importance of factual information and emphasize the absolute necessity of studying the possibilities of new methods, and their application in improving the quality and the design of our industrial products, reducing their costs, and generally increasing their attractiveness to potential customers.

Accurate and up-to-date factual information is, therefore, more vitally essential to-day than ever previously in our industrial and commercial history. How it may be acquired, how it may be dealt with (classified, recorded, filed), and how best it may be made readily and generally available to all those requiring it: that is the subject of our discussions at this meeting.

It is, surely, very practical business that we are concerned with. As I understand it, we have come together (at the first, but certainly not, we hope, the last of meetings on Tyneside of the Northern Branch of Aslib) not to talk somewhat airily of what *ought* to be done, or even, at this meeting, so much of what *might* be done in the provision and making available of industrial and commercial information. Our purpose is to make known, as well as we can, to those who should be interested, what *is* available *now*; the services which are actually at our elbow, ready and waiting to be used, or used to much better advantage; for they are, of course, being used already by those who know of them and understand their value. But much greater use ought to be made of them, and no doubt would be made were they more widely known. That is why (under the co-ordination of Aslib) there are being presented to this conference statements (necessarily in summary and general form) of the facilities offered by the three main types (or aspects is the better term) of library service. The public library serves all sections and classes of the local community; the university library's essential concern is with the degree student and the research worker; the works or society library and information bureau caters intensively for the designers and technicians of its specific industry (whose material must consequently be narrowly and highly specialized, and to some extent private). These three aspects are linked together by the library exchange and co-operative loan system to be described this afternoon by Miss Scurfield on behalf of the Northern Regional Library Bureau—part of an inter-library loan system which, you may be interested to hear, was first organized in this north-east area seventeen years ago and which now covers the whole country, with the National Central Library in London as its focal centre of linkage and co-ordination, making it generally possible to meet at any place demands for books, articles from periodicals, etc., not otherwise locally available.

In his able and practised exposition of the general nature of a technical information service, my friend, Dr. Parke, whose position and experience make him an acknowledged expert, has stated that 'the function of intelligence is to find, to obtain, to assess, to store, and to make available on demand, all information of value to the institution concerned and to its collaborators'. I cannot improve upon that as a statement of the 'intelligence' service which is (or ought to be) attempted by the public library, and it is my duty to attempt to give form and content to that statement so far as the public library is concerned.

In the official report of the recent Lambeth Conference may be found a resolution to the effect that free and unhindered access to accurate information is one of the basic and essential rights of humanity. It may be stated at once and without fear of contradiction in this country (at least at present!) that a primary function, indeed, the paramount duty, of the public library is to make readily available accurate, up-to-date, and objective information upon all subjects as to which it may be consulted; and more particularly upon matters of especially local concern. Except in so far as such knowledge may be helpful in dealing with an enquiry, it is no concern of the library as to *why* a piece of information may be wanted; nor is it usually proper for it to attempt any assessment of the importance of the enquiry, or of its apparent triviality. Many instances showing the force of this could be quoted by every librarian, without citing the now legendary one of the exact position of the wart on Oliver Cromwell's nose. Inquiries and requests must all be received and dealt with on the same footing, with the assumption that what is wanted is wanted for some purpose. That is a commonplace in public librarianship at least. Advice may be attempted (with due caution) if specifically asked for ; but the library is an information centre, not a personal advice bureau. Its staff is there to proffer the information that is needed to meet the enquiry, or to indicate where that information may be found : what use may be made of the information, when provided, is beyond the library's concern. It may be needed for producing a new invention, for selling an article in a new territory ; it may be for a schoolchild's essay, or it may be for solving a puzzle—all enquiries are to be dealt with objectively and as fully and accurately as possible. The duty of the reference assistant (be he working in the history, literature, fine arts, science and technology, or commercial sections of his library) is to familiarize himself so far as possible with the literature of his subject and its bibliography—and this comes very largely from experience in dealing with actual enquiries. Very rarely, in the public library, can the assistant be regarded as an expert upon the subject itself (however desirable that may be) ; but a well-trained and experienced assistant (in the reference library in particular) may very properly be expected to know his way about the literature of a subject and its whereabouts. If he can specialize in one field, so much the better for the library and its clientele—which is a great argument for the American practice of 'subject division' in the larger public libraries. The averagely good reference library assistant, however, has perforce to be a jack of many subjects, whether or not he is a master of any one.

A further point, and one which distinguishes the public librarian from his colleagues in the university and also from those in the works, society and other special libraries : he serves all sections and classes of the community and must offer the facilities of his service to all equally. This gives him a very wide field to cover and compels him to be interested and active in many varied and sharply contrasting directions. It also, I believe, gives a special attraction to his work. While catholicity of outlook must be preserved, he is not, as an individual (given a well-representative senior staff), prevented from some degree of interesting and profitable specialization by following to some extent his own particular bent. But he must always have in mind that his service has a duty to the academic researcher, to the student (both advanced and beginner), to the technologist and industrialist, to the commercial business man, and also, of course, to the ordinary 'general reader', whose reading (it may be remarked) is by no means without cultural value because it is chosen mainly for recreation—which may cover every type of book from philosophy, theology, history, and belles-lettres, down to a detective novel for the week-end.

But I am concerned here with one section of the public library's clientele, or potential clientele—those whose business lies in applied science, technology and commerce. Here, again, it must be noted that there is some difference between what must be covered by the public library and what material must be provided in the way of books, etc., and the services which should be offered in the university and in the special library, neither of which cater in anything like the same degree, if at all, for the beginner and very elementary student, or for the artisan ;

though both share with the public library the function of serving the advanced student, the research worker, and senior executives of an industry or business. Both the reference and the lending or home-reading departments of a public library are visited by students (of various grades) from the university, the technical college, the evening class; by the apprentice and by the workman; for each of whom the public library is usually the only source of access to books and periodicals, and for whom every effort should be made. Mr. J. P. Lamb, City Librarian of Sheffield, aptly remarked at an Aslib Annual Conference some years before the war that 'An active library system should carry large stocks of modern technical books in its lending departments for the artisan; it can do great service to technical education by this means'.[1] Very true then, this statement has even more force to-day, when there are many more training classes specially provided for the various trades, and when individual firms realize the value of instructional classes for their apprentices, in many cases providing such themselves. I think it may be said that we are alive to this particular need in Newcastle, where an annual grant is made by the Education Committee (to be spent at our own discretion) specifically to assist in the provision of technical books, using 'technical' in a very wide sense. And we find very well worth while the compilation and issue of reading lists upon selected subjects, for which we now have a quite embarrassing demand, from industrial and trade associations, from the tutors and students of technical and commercial classes, and from individual readers. In this activity, we are, of course, by no means exceptional, though considerably more is now being done than in the past. We are in good company with such public libraries as those in Bristol, Leeds, Manchester, Sheffield, to mention but a few of many which could be cited.

So much for the more elementary and general student and the artisan. Turning to the higher levels of our technical and commercial work, more specifically the subject of this paper, I will refer to some of the main aspects of our present work in the Newcastle City Libraries, and the facilities available, for the technologist, the industrialist and the business man.

Let me say at once that, although we now do a good deal, and considerably more than those who could make most profitable use of the existing service are aware, there is a great deal that remains to be done, but which will, I hope and confidently expect, be done as soon as conditions of accommodation, equipment, and staff permit the full implementation of our plans—in the now not very distant future, subject to our obtaining the necessary 'permits' and overcoming or by-passing all the various impediments which delay every forward development nowadays. Our Central Library is an obsolete and very congested building and we have to exercise much ingenuity to obtain the most profitable use from the very limited space available—pending the erection of the new premises envisaged, somewhat distantly, I imagine, in the projected civic centre.

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[1] *Report of the Proceedings of the Ninth Conference, Aslib,* 1932, p. 65.

For some thirty years there has been provided in the larger industrial and commercial cities a separate department, or departments, in or near the central library known (with some variants) as the commercial and technical department, or the two departments separately. Most of these were provided in response to local demand and all of them are doing valuable work in their locality; some of them, as is well known to active members of Aslib, being conspicuously successful; such, for example, as those at Birmingham, Bristol, Leeds, Liverpool, Manchester and Sheffield. The Commercial and Technical Departments at Manchester and Sheffield may be regarded as models, as their placing and planning, being in new buildings opened during the earlier 'thirties, could be specially provided for.

Failing separate accommodation (which should be on the ground floor of the library, conveniently near the main entrance), the special work of the commercial and technical department must be conducted in the general reference library, as is the case in Newcastle at the moment. But it is most desirable; indeed, at some point of development it becomes quite essential, that the commercial and technical department, or departments, should be separated out of the reference library, and be to a large extent self-contained. Otherwise, it is not possible to find space for the steadily increasing special equipment and fittings which are necessary for this work, such as large-size pamphlet boxes, index and filing cabinets of various sizes, etc. Furthermore (and this, I believe, is very important), by having a separate department it at once becomes possible for the staff to specialize, eventually becoming very well equipped to handle technical and commercial material of all kinds, and fully to exploit its use to the best advantage. So long as this highly specialized work is done as a section of the general reference library work, and however much attention is given to it, the staff concerned have necessarily to handle other work as well; which, however essential for their general training when comparative juniors, means that the services of a potentially excellent specialist are, to a large extent at least, lost to the library and its clientele. And there is, of course, a further consideration: by having a separate department, the commercial and technical enquiries are concentrated, whether made in person, by post, or by telephone (and probably the majority of them are made by telephone, a very prompt service being essential in this work). This in itself aids specialization by the staff (all knowledge being a process of linking up and co-ordination); and, incidentally, it makes for a greater serenity in the reference library itself, where the work done by readers in other subjects—history, literature and the arts—is usually for longer periods at a time and demands quiet and freedom from the disturbance caused by telephones ringing and assistants walking about.

Perhaps I may remark in passing that, taking a somewhat forward view, it is not unlikely that the days of the large public general reference library in this country are numbered. It seems, as traditionally organized, to be trying to do too much to do thoroughly anything in particular. This is, of course, a personal view; but I am much impressed by what

I know of the plan of 'subject divisions' in the larger American public libraries; in which there is a separate department for each main subject or group of allied subjects, each having its own staff of specialists who deal with their stock through all its stages; and in which books for reference use only and those available for home reading are placed together on the shelves. It would be a quite logical development over here, where the larger public libraries at any rate have their separate music department, their separate commercial and technical departments—and at Edinburgh, separate departments for fine arts, and history with economics, in addition. This, however, is rather by the way.

As I said a few minutes ago, the work of the technical and commercial section at the Newcastle Central Library has at present to be done upstairs in the general Reference Library. But (according to plan) a separate department, which is included in the scheme of comprehensive re-organization now being carried through, having, of course, its own special staff who will concentrate entirely upon this work, is to be placed on the ground floor, ideally near the main entrance to the building. (For those who know the Newcastle Central Library, the new commercial and technical department is to be placed in the former Junior Library.*)

As to the material in the technical and commercial sections of the Newcastle City Reference Library (a fairly typical example of its size, though its structural arrangement and layout is very old-fashioned by contemporary standards), this comprises a representative open-shelf collection of the standard reference books, elementary and general, specialist and advanced, including year-books, manuals, dictionaries and cyclopædias, directories (geographical, industrial, and commercial) for this country and a number of foreign countries, atlases, telephone directories, telegraph and cable codes and the like. A number of such works, or duplicate copies of them, being in continuous use by the staff to answer telephone enquiries, are shelved at the enquiry and issue desk, which also houses an array of the most frequently used bibliographies and indexes, the latter including *The Times Official Index* and *Keesing*; also town guides covering the British Isles, etc. When the projected move is made downstairs to the new separate Commercial and Technical Department (and may that be soon!) the open-shelf collection will be considerably expanded and access will also be given to card indexes and other tools which at present have to be kept for staff use only. The bulk of the book-stock (and this includes material in—that arbitrary term—'pamphlet' form) is perforce behind the scenes; but it is all recorded in the public catalogue (which has a generous provision of added entries for books demanding them) and is readily available on request, the only formality being the completion of a simple form recording name and address and the book drawn. I need hardly add to this audience that our general policy in selecting the books is an attempt to cover all technical and commercial subjects generally by the recognized best books in up-to-date editions, giving intensive coverage to local industries and trades. Being well aware that in this field many books are beginning to be out of date (if not actually superceded) by the time they reach the shelves, special attention is given to the publications of a pamphlet nature which record new developments, the publications of the various Government Departments and sponsored departments, for example, and the extremely valuable and highly specialized material issued by research institutions and industrial and technological associations (such as the Copper Development Association, Iodine Educational Bureau, Concrete Association, etc.), many of which, I am glad to say, are supplied to us free of charge as issued. It is, of course, essential, that the technical journals should be carefully watched, so that such material can be requested or ordered immediately.

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* This new separate department is to be opened in the very near future,

The various house organs, now happily resuming publication, also trade catalogues, should be collected so far as possible; they will often provide material for answering an enquiry for which books and the more usual and orthodox sources have been searched in vain. (When I was at Coventry, where the Central Library in pre-blitz days had its separate and very active commercial and technical department, a trade catalogue collection of several thousand items was maintained, covering practically every product, arranged in the subject order of the main classification and adequately indexed for easy use by both staff and public. Of its usefulness there can be no question. We have recently begun to establish a trade catalogue section in Newcastle, but it cannot be properly developed until we have our separate commercial and technical department at the Central Library.) Mention should also be made of indexes to trade names and branded products, which prove very useful as quick-reference tools.

Other material now in the Reference Library includes the complete Patent Specifications for the last sixteen years and the full range of Abridgments with indexes, the B.S.I. Specifications, the B.I.O.S. and other reports on German industry, official trading returns, and the series now in progress describing commercial conditions and opportunities in various countries. Statistics, both general and special, are adequately represented.

In that important section of technical and commercial work, periodicals and indexes, we are now working and building on a fairly sound basis. Some 120 technical and commercial periodicals are taken at the Central Library, some of them being represented also at the Branch Libraries. The current numbers are at present displayed and listed in the periodicals division of the recently reorganized Central Reading Room in Princess Street (just round the corner from the Central Library). Recent file copies are quickly available on request and bound sets are maintained of the more important periodicals, with, of course, *The Times* and the local newspapers. These specialized periodicals are not selected at random: an attempt is made to cover the main industries and trades; additions are made when recommended with some authority and appropriate deletions are made annually. It is hoped somewhat to extend our holdings of periodicals when our new department is available, and to display them, with back numbers, in that department; for further specialized demands must then be expected. Meanwhile, the physical limitations of space, also the lack of adequate response to the experimental provision of certain items, has somewhat restricted the number of technical periodicals taken. Although at Coventry we had nearly twice the number of periodicals, the main interests are quite fairly covered at the Newcastle Central Library, and I may add that the Libraries Committee are very willing to make additions on sufficient demand, though they are, quite properly, reluctant to pay for periodicals which get negligible use.

Each senior assistant in the Reference Library is responsible for examining the periodicals on subjects in which he is specially interested. In addition to noting selected book reviews (but nowadays we have usually had the books in stock some time before the reviews appear !), it is his duty to make entries of appropriate articles for insertion in the current index maintained in the staff enclosure. (I say 'current index', as the entries are, of course, weeded out as they appear in the various indexing publications to which we subscribe.)

I must not pass too lightly over this matter of indexing. Useful in any subject, the maintenance of up-to-date indexes is, I am sure you will all agree, of particular importance in technical and commercial library work. In fact, with only a slight exaggeration, it might be said that in this department the indexes to periodicals and to the other varied sources of specialized information are the most important part of its equipment. A good index will not only keep the information service up to date, but it can record material found, very often, in the most unlikely and out-of-the-way places, and which cannot be shown in the subject catalogue. To cite but one example : rather more than a year ago a book appeared with the title *Contractors' Plant*, by one Way, if I remember rightly. This book, with its wide coverage, had to be classified and catalogued as 'mechanical engineering' (621· in the tiresome and unaccommodating Dewey scheme). Being thus placed with the hundreds of other books on that broad subject, its special value was hidden in the catalogue and might for evermore have been lost, but for being noted by accident or by that rare meticulous reader who turns over every card entry on his subject in the catalogue. The several topics in this book could not be brought out in the subject index to the catalogue (as those who make classified catalogues will readily understand) ; but it was perfectly easy to insert as many subject entries as we liked in our general information index, thereby ensuring profitable use of a very useful book.

The general information index in the Newcastle Reference Library, in addition to recording topical articles in current periodicals, and many items in books, of which I have just cited one typical example, also contains the entries for the miscellaneous material placed in the Information File ('File of Current Data' as it is called at Manchester). This latter, housed in folders in steel vertical files, comprises leaflets too fugitive to be treated as catalogued pamphlets, articles or parts of articles clipped from periodicals not preserved for binding, and various bits and pieces selected from a wide range of sources. Practically everything may be grist for the mill of our Information File. As it is regularly checked and weeded out by a responsible officer, the staff is encouraged to be collective rather than too rigidly selective. The material in the Information File is classified and indexed more finely than our application of the Dewey scheme to books and the main pamphlet collection. Another of our indexes records how specific problems raised by out-of-the-way enquiries were dealt with. Frequently a wide range of sources is thus recorded on a card, or several cards, and future enquiries of a similar nature are sometimes solved with a rapidity that much impresses our clients.

I might mention that the recent acquisition of the useful 'Copycat' apparatus enables us to supply, within a few minutes if necessary, photographic copies of pages from books, having tables of data, for example; excerpts from periodicals, illustrations and pedigree tables, which used to take many hours of typists' time, when such work could be undertaken at all. This is especially useful when a certified copy of a plan, etc., is required.

I believe that the foregoing summary account of our technical and commercial work at the Newcastle Central Library may indicate that the public library has a substantial and potentially very valuable contribution to make in the field of our subject to-day. Much of it has been started since the war (especially our indexing work); generally it is in the stage of development; which development will be extended and intensified when our new separate department is established and in working order. No one is more conscious than I that much remains to be done; that much more is desirable, indeed essential, if the full service to local industry and commerce which I envisage is to be supplied. With that qualification, it may be claimed that if all those industrialists and business men, and their staffs, who could certainly obtain great benefit from the existing service, made use of the facilities which it offers (or, indeed, were aware of those facilities), they would be more than surprised at the results obtained. We, on the other hand, the Reference Library staff, would be most embarrassed, until our resources were strengthened; for existing demands keep the department busy every week-day from 9.30 in the morning until 9 o'clock at night.

For obvious reasons I have treated my subject by describing the work done in one library, as I could thus speak from first-hand knowledge. But, as those of my audience who know the service provided, for example, at Sheffield, Leeds, Manchester, will be well aware, what is being done, and what is proposed to be developed in the Newcastle City Libraries is quite typical of 'the contribution of the public library to industrial, technical and commercial information'.

My last few words relate to a subject which has for many years had particular interest for me, that of library co-operation. Miss Scurfield is to talk to us this afternoon about the work of the Regional Library Bureau, so I need not and will not attempt to anticipate her. Nor will I (at least in this paper) do more than mention by name what used to be known as 'the Sheffield Experiment'[1] in pooling local resources of technical periodicals. Some here present will know all about that. But I would not like to sit down without attempting to draw your attention to the very valuable results which may surely be achieved, both in greatly increased efficiency and in economy (i.e., the maximum return for a given expenditure) by co-operation locally between libraries of varied types. When I was Librarian of the Newcastle Lit. and Phil. (a longer time ago than I care to calculate), useful co-operation was established between that library and the library of King's College, then in comparative infancy and (without its present fine building) housed in two rooms. As a result of that co-operation, and of certain other matters, including the production of a printed union list of current periodicals provided in about a dozen local libraries, which I had the honour to edit (a few copies still exist, but please don't look at one too closely, I was a much younger librarian then !)—out of this co-operation was born the organization of the Northern Regional Library Bureau, which we in this area take some North Country pride in knowing to be the first regional bureau to have been established, and the model for those eight or nine others which together now cover the whole of Britain, and whose resources are interlinked with the National Central Library as their common centre. This inter-library loan service has much to offer to industrial firms, as well as to the more general reading public. As for periodicals, there is a note in my private project book that I hope at least to assist in the production of another and better union list of local holdings, which may lead to establishing an exchange system similar to that which operates so successfully at Sheffield. Co-operation between the Newcastle City Libraries and King's College Library is happily well established. Many of the College students (partly, at present, because they are crowded out of their own reading room) regularly use the Reference Library, and are allowed special facilities in the way of borrowing additional books from the home-reading departments, etc., while I may send a serious reader, whose needs I cannot supply, with a chit to King's College, where he will be given admission (if there is still any room for him nowadays) and every assistance. With its wide range of periodicals, including many hundreds of titles in both English and foreign languages, the library of King's College is a most valuable local source of current technical information—but of the contribution of the university library we are to hear from my friend MacKenna in the symposium arranged for this afternoon.

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[1] J. P. Lamb, 'The Sheffield Experiment—How it is Succeeding,' *Report of Proceedings of the Twelfth Conference*, Aslib, 1935, pp. 97–102.

INFORMATION SERVICE: THE CONTRIBUTION OF THE UNIVERSITY

By R. O. MacKenna
Librarian, King's College, Newcastle upon Tyne

Newcastle upon Tyne Conference, 7th December, 1948

I WAS asked to speak on 'Information Service: the Contribution of the University'. I take that to mean specifically the contribution that a University library can make towards satisfying the information needs of industrial research: but I hope you will not think me irrelevant if I begin by discussing the nature and functions of a university library in general, for these determine the contribution which it can make, and must therefore be understood before that contribution can be assessed.

What, then, is a university library, and how does it differ from any other kind of library? Forget for a moment that a library is a collection of books. It *is*; but that is not its fundamental characteristic. A library —*any* library (and any information section, too, for that matter)—is first and foremost a collection of readers. The librarian's or information officer's task is first to comprehend his reading public and then to acquire the right printed materials to meet their needs, and make these materials, and the information they contain, available to them. It sounds a simpler task than it proves to be in practice! However, for the moment the point is that the reader is the determining factor in each case; different types of reader need not only different types of book, but also different types of service.

In a university library you will find two main types of reader; those engaged in enlarging the existing body of knowledge by fundamental research, and those engaged, whether as teachers or as learners, in the process of disseminating knowledge. (Some unkind critics, by the way, recognize a third type—identified with the librarians themselves—which is said to be interested only in the conservation of knowledge: but I hope such criticism may nowadays fairly be termed a gross libel!) To return to the point: the two different functions, teaching and research, require very different kinds of books. Research needs source materials, original records, compilations of key data, standard monographs, and above all, on the science side at least, periodicals, in which appear reports of the latest advances in knowledge, sometimes several years before they find their way into monographs. Teaching and learning, on the other hand, require systematic treatises, commentaries, and text-books of varying degrees of simplicity. Within even a single subject, then, the university library must provide an unusually wide diversity of types and grades of material.

The next point to consider is the vast range of subjects studied, ranging from the folk-lore of Polynesian races to modern educational theory, from Fine Art to engineering drawing, from music to medicine, from classical Greek to economics and social studies, from philosophy to nuclear physics. This wide range has two results. In the first place, taken in conjunction with the diversity of grades I have mentioned, it means that a university library necessarily houses a fairly considerable number of books. King's College Library, for instance, holds at the moment 180,000 books and 60,000 pamphlets, and adds another 8,000 or 9,000 to the total each year; it receives regularly well over a thousand periodicals, about 500 of which are foreign. And this is still comparatively small as university libraries go. Secondly, when such a wide range of subjects is covered, it becomes impossible for the library staff to analyse the contents of individual items in this collection. No university, in this country at least, could contemplate adding to its library staff the number of highly-qualified subject-experts who would be required. As it is, mere recording taxes existing staffs to the full.

This is an important distinction from your point of view. An information service such as Dr. Parke's, unless I am mistaken, has as its ultimate though perhaps unattainable aim the analysis of its collection into single facts or items of information. These are the units in which the staff of such a service must think. For the staff of a university library that is impossible; normally it can afford to think in terms of nothing smaller than single books or documents. Fortunately such analysis is not usually required by the readers concerned. The younger undergraduate works in terms of whole books—too often only those which are actually prescribed for him. The senior student, if he hopes to become a scholar, should be learning the technique of research by practice, and to spoon-feed him is a definite *dis*service. The academic research worker, again, will usually be so well acquainted with the bibliography of his subject that he will not need such service very often, and will in any case, by virtue of his knowledge of the subject, be able to do it very much better for himself when he *does* need it. In fact, by going through each issue of the journals in his field on publication, he probably does effect the service for himself as a continuous process. Moreover, he carries it into the papers he himself writes, by giving full references to other papers consulted; and in turn he benefits from the same practice carried out by others.

Indexing and abstracting, then, are no regular part of the service given by the staff of a university library to its readers—partly because they are not feasible, and partly because they are not vitally needed by these readers. The real needs are three in number. First, to provide readers with a means of finding out what actual books and documents are in the library, and where they are located. This is achieved by very thorough cataloguing and shelf-classification. Second, to provide means of finding what else has been written on any subject, and where it can be obtained. This is achieved, in so far as it *is* achieved, by building up a large collection of published bibliographies, library catalogues, union lists, and abstracts and indexes to periodicals. These are particularly useful to academic readers, because they analyse the very periodicals which publish the results of fundamental (or academic) research—including, incidentally, the journals to be found in the library itself. (The results of industrial research, on the other hand, are, I imagine, more often published in reports of firms, trade papers and other media which do not come within the purview of such indexes and abstracting journals, and for that reason an industrial information service must do much more indexing and abstracting for itself.) The third need is a staff trained in reference work, to search out information the reader cannot find for himself—but, *this* is the point, doing it not in advance, but only as and when it is required. I should add that there is nothing special about these three needs—they are the common inheritance of all libraries. What is important to us at the moment is simply to acquire a clear picture of the means adopted to meet them in a university library—mainly from the point of view of their adequacy or inadequacy for purposes of industrial research.

Now, how does all that I have said so far apply to the subject of this conference? I think the answer is this: that the potential contribution which a university library can make to the information needs of industry is, *first*, a collection of scientific and technical periodicals which will usually be the best in the area; *second*, a good collection of standard monographs, arranged in classified order on open shelves (and, therefore, much more accessible than the perhaps equally good collection in the municipal reference library); *third*, an excellent range of published keys to other literature not actually held by the library; and perhaps, *fourthly*, the service of a trained library staff. Whether these constitute a significant contribution to your needs is for you to say, rather than me.

But I have one thing more to say, which I fear you will find discouraging. You would perhaps notice that I emphasized the word *potential* when speaking of the university's contribution; and I confess I did so with intent. To make the contribution real in the fullest sense means admitting industrial research workers, as a third class of readers, with the full privileges of the two classes I have already mentioned—except, that is, for the privilege of determining what the library shall be. It is indeed the practice of university libraries to admit external readers, but these must always be, as it were, residuary legatees. The needs of staff and students come first, and anything which interferes with the fullest possible satisfaction of their legitimate needs must suffer.

Until about 1945 nothing arose to call in question the privileges granted to external readers, which are in any case consonant with one of the secondary aims of the universities, the furtherance of closer contacts with the world outside. But since the war an acute question of priorities has arisen in the universities, as in every other sphere of life—numbers of students have expanded phenomenally; staff, and even the variety of courses given, have increased also, though in far smaller degree; but bricks and mortar are less flexible. If I may quote King's College as an example again: you perhaps read the other day that the number of students enrolled this year was not far short of two and half times the number enrolled in 1939. Yet the library is no bigger. All too often in the last two years students have had to queue for seats, and the waiting lists for many books are fantastically long. Even research workers complain of delays and congestion and difficulties in their section of the library.

When even the university's own people are thus pinched, the outlook for the external reader is poor ; and at King's College it has, in fact, been found necessary, though with great regret, to limit admissions of new external borrowers to members of institutions with which the university had special agreements in years past, and individuals engaged in purely academic research. Nor is any prospect in sight of alleviating this most regrettable state of affairs.

In short, the university's contribution to general information service is at present, and must remain for a long time, more potential than real. One little stream, it is true, does still remain unblocked ; most university libraries co-operate whole-heartedly in the inter-library lending system of the country, and King's College does to an even greater extent than most. But this is Miss Scurfield's province, and I must refrain from trespassing upon it now.

NOTE.—Now that this paper is to appear in print, it is necessary to make three points clear :—

(*a*) The time at my disposal being only fifteen minutes, I deliberately confined myself to considering only the library aspect of the problem, and said nothing of the other contributions (such as translation services, and technical advisory service by the teaching staff) which universities can and do make. As the subsequent discussion revealed, this was perhaps a mistake on my part !

(*b*) The paper was written for a predominantly local audience, and with a special local problem very much in mind. It should not necessarily be regarded as representing the views of universities in general, despite the rather general terms in which it was couched.

(*c*) I have perhaps even been unfair to King's College Library, which already has considerable industrial contacts, and is maintaining them. It is, in fact, the very extent of these which makes further expansion in this direction so difficult at the present moment. Even this moratorium applies only to *full* participation in the Library's facilities.

THE PROFESSIONAL SOCIETIES' CONTRIBUTION: THE LIBRARY OF THE NORTH EAST COAST INSTITUTION

BY T. S. NICOL

Secretary of the Institution

Newcastle upon Tyne Conference, 7th December, 1948

Introduction

THIS conference is, I understand, called primarily to advocate the search for and show means for methodizing the provision of technical information in industrial companies—the systematization of the answering of questions that arise in the conception, design, production and service of manufactured articles and materials. Three sources of such information have already been dealt with: the great public library, by Mr. Hinton—who, I am sure, would not lightly reject a challenge to provide literature—given that it exists—on any subject; an equally great, university library in which all branches of learning are represented; and the great works library, by Dr. Parke.

The first two of these sources are normally available to and are, in practice, used by a very large number of borrowers or enquirers; the third is more restricted and is, in a sense, private—although this statement will be qualified by the next paper in the symposium.

The library of the professional society is a fourth type and approximates fairly closely to the third category in that its availability is normally restricted to the members of the society (subject to the afore-mentioned qualification) and in consequence it does not have to cope with nearly such a large number of enquirers as the public and university libraries.

THE ORIGIN OF THE NORTH EAST COAST INSTITUTION LIBRARY

The Library of the North East Coast Institution of Engineers and Shipbuilders has been in existence now for sixty-four years. The Institution was primarily founded for the advancement of the sciences of engineering and shipbuilding: the formation and maintenance of a library in these subjects was an immediate and obvious means of fulfilling that purpose. In this respect, it merely followed the example of the father of all British scientific societies, the Royal Society. (Incidentally, it should be mentioned that there is another, and older, professional society having a library in Newcastle: the North of England Institution of Mining and Mechanical Engineers, in whose hall this meeting is now sitting. It is a rich store of information on mining, geology and metallurgy).

It should be emphasized that the North East Coast Institution's Library necessarily represents only one of its activities: the Institution, for instance, is a publisher of technical papers.

Location

The Library is housed in Bolbec Hall, Newcastle. It includes a large and attractive reading room which is open from 9.30 a.m. till 5 p.m. on Mondays, Tuesdays, Thursdays and Fridays; from 9.30 a.m. to 9 p.m. on Wednesdays and on Saturdays from 9.30 a.m. to 1 p.m. and 6 p.m. to 9 p.m. There is open access except to one book-case and the store-room.

Size and Scope

The collection is limited in scope: it covers only shipbuilding and naval architecture, metallurgy, aeronautics, and the leading branches of engineering (excluding mining). As it has been earlier indicated, the number of bound books is comparatively small—at present approximately 5,000. The number could be considerably larger, but for the policy of the Institution to withdraw, at frequent intervals, obsolete books.

The periodicals received (including the transactions of societies) total 155. Of these, forty are from abroad. Complete sets of representative engineering and shipbuilding magazines are kept and the rest are filed for a varying number of years. The transactions of societies are as a general rule preserved in bound form.

Examples of the pamphlet items of the collection are British Standard Specifications, of which a more or less complete set of those of interest to engineers and shipbuilders is kept, the R and M of the Aeronautical Research Committee; most of the British Intelligence Objective Sub-Committee, F.I.A.T., C.I.O.S. Reports, University of Illinois Experiment Station Reports, Aeronautical College (Cranfield) papers, U.S.A. de-classified Reports on Atomic Energy.

An interesting recent addition to the 'transactions' received is the *Journal of the Chinese Society of Naval Architects and Marine Engineers, Shanghai.*

The Institution is also due to receive the Technical Reports of the Taylor Ship Model Experiment Tank, Washington.

These reports, papers and specifications amount to many hundred separate publications.

Classified Index to Contents of Periodicals

The Institution's objects imply an obligation to encourage the reading of the most up-to-date engineering and shipbuilding literature. The provision of the books and periodicals goes some distance in the fulfilment of this duty. A desire for information is inferable from the fact of the member's joining the society: a form of *encouragement* is to make him aware of the latest published knowledge on his subject. Consequently, it is necessary to sift and classify the contents of the many periodicals received and to issue frequent lists of the classified articles to the members. The Institution has published a classified list of this kind since 1913 (excluding part of the First World War period). It is issued to all members at home and abroad, to certain non-members and to a few libraries (including some foreign). The list does not include abstracts of the articles. The pros and cons of abstracts were considered in 1913 and have been reconsidered from time to time since: the various arguments will be familiar to you. The Institution's Library Committee is satisfied that, given an adequate title, the author's name, and the date of the article, the member will know whether or not to look at the article itself—and he can obtain this from the Institution either by calling at the library or by post.

It will have been noted that not by any means all of the contents of the periodicals are listed. Endeavour is made to include only matter of technical interest to the members of the Institution: articles on subjects outside the Institution's allotted field, however important, are not listed. Here, incidentally, may appear to be an argument for some central indexing service. The function of this list, however, is to provide a body of readers, or potential readers, with a brief, easily read, guide to the articles which are likely to concern them in their profession in a comparatively large number of periodical publications. Without such a list, they could scarcely see the wood for the trees. It saves them much work.

The list is published seven times per annum. It is printed on pink paper to distinguish it from other Institution publications and, in consequence, it is commonly referred to as "the pink slip".

A double classification of the articles is used: a broad "arbitrary" system of headings and sub-headings for the convenience of the members; and the Universal Decimal System. This second classification was introduced about fifteen years ago, when it was decided to maintain a cumulative card index of the contents of the lists. At first, the U.D.C. numbers were not shown on the list, but they were inserted at the request of a librarian and, it is understood, are also used by some members for their personal collections of technical references.

The Institution's cumulative card index is obviously a valuable guide to information on the subjects covered, containing as it does over 15,000 classified references. It is used not only by the Library staff, but directly by those members who are not deterred by the U.D.C. system of classification.

For those members who wish to make a wider search than is provided by the Institution's own resources, a number of bibliographical reference works are available in the Library. These include abstracts in various forms published by the following:—

BRITISH

British Cast Iron Research Association.
British Coal Utilization Research Association.
British Institute of Management.
British Non-Ferrous Metals Research Association.
British Shipbuilding Research Association *Journal.*
Engineer's Digest.
Index Aeronauticus.

Institution of Civil Engineers *Abstracts.*
Institution of Mining Engineers *Abstracts.*
Institute of Welding.
Science Abstracts :
  Physics.
  Electrical Engineering.
Zinc Development Association.

FOREIGN

Annales Techniques de la Marine Marchande.
Applied Mechanics Review (U.S.A.).
Society of Naval Architects and Marine Engineers.
La Ricerca Scientifica
  (Italian Research Council).

FINANCE

The cost of maintaining this library, and, in effect, the library of the average professional society, would be almost prohibitive but for the fact that such libraries are, as previously stated, only one of the functions of the bodies owning them. In this respect they have an advantage over the other 'Information Services' considered. The societies are usually publishing bodies and they exchange their papers for those of kindred societies, in this country and abroad. The term 'kindred' is used with generous latitude in the case of the North East Coast Institution Library at any rate, and some of the exchanges take place between the Institution and bodies which are concerned more with pure than technical science.

The great bulk of the ordinary periodicals are received on the exchange system also.

Who May Use the Library

The Library has been formed primarily for the use of the members of the Institution, since, of course, they pay for it. For many years, however, long before the establishment of the Northern Regional Library Bureau, there were agreements in operation with other libraries on the north-east coast, in particular, those of the Literary and Philosophical Society, The North of England Institute of Mining and Mechanical Engineers, and King's College, whereby the members of the four bodies could at least consult any of the libraries. The introduction of the Northern Regional Library Bureau made the contents of the Library very widely available, both in this district, and, through the National Central Library, throughout Great Britain—subject to the conditions of membership of the Bureau.

In practice, however, it has been found that readers interested in the literature of the kind kept in the Institution Library are members. Moreover, the technical staffs of firms of engineering and shipbuilding companies are strongly represented in the membership and information required by firms is obtained through such members.

Consequently, although in principle the Institution Library is private, in practice it is a potential information service to the industries of the north-east coast.

How the Library is Used

From the staffing standpoint it is fortunate that self-help is the rule in the Institution Library. Members requiring specific information find it for themselves, after having been, if they so request, directed to probable sources from which the information they require can be obtained. Presumably, in an ideal information service, all they would have to do would be to ask and they would receive!

The commonest use of the Library, however, is by those members and firms who as a matter of routine examine the Pink Slip and borrow and record the items indexed, in which they are particularly interested.

Conclusion

To sum up, the Library of the North East Coast Institution is an easily accessible, and, quantitatively, not inconsiderable bibliographical store, which is available, under the conditions mentioned, to Information Officers.

INTER-LIBRARY CO-OPERATION: THE REGIONAL LIBRARY BUREAU

By Janetta G. Scurfield, F.L.A.
Northern Regional Library Bureau

Newcastle upon Tyne Conference, 7th December, 1948

THE key-note of to-day's conference has been information, indeed I could perhaps say information about information. We have considered in particular the need for and importance of information in the industrial and commercial world where it may well be said to be as vital as oxygen for the maintenance of life itself.

The preceding speakers have outlined the part played by the various kinds of libraries which they represent in fulfilling their common purpose of collecting, arranging, recording and distributing the graphic representation of knowledge in all its forms, whether printed, written or photographic, as books, pamphlets, journals, manuscripts, microfilms, and so forth, and there is no need for me to stress the great value of their work.

My part in this symposium is to describe how the vast majority of these different libraries work together in a scheme which enables any of their readers to have access, through the medium of their local library, whether it be public, university or specialist, to about 21 million volumes and many thousands of sets of periodicals. This may seem to be an extravagant claim—if you do not call it by another term. Furthermore, provided a reader is within reach of postal facilities, it is almost immaterial where he or she happens to live, whether in a large city like Newcastle, Birmingham, Leeds, or in an isolated part of the country such as the Hebrides, or a remote Northumbrian hamlet.

I shall tell you first what this scheme does and how it works, what sort of libraries use it and the type of books which can be got through its agency, and how individual readers can make use of its facilities.

The scheme is known as the inter-library lending system and through it all the participating libraries virtually pool their book stocks in a nation-wide system of mutual co-operation, with the aim of providing any reader with practically any book (this term is used in its broadest meaning to cover all printed and written material) which is not available locally. A moment's reflection, will, I think, show that such a scheme must be a boon to anyone whatever his or her interests may be, and in particular to those engaged in research, commerce and industry who are our chief concern to-day. However excellent may be the book provision of any library, there will be occasions when it is unable to satisfy from its own resources all the demands made upon it by its users. While it is often fairly simple to find out in what book some specified information can be found, it may be quite another matter, if the required book does not happen to be in stock, to trace and obtain a copy of it. This, as you will know from experience, applies particularly to highly specialised books and journals on science and technology, and all out-of-print works. The task of locating wanted books and arranging for their loan to other libraries is the function of a Regional Library Bureau in promoting library co-operation.

This, as I have already said, is a nation-wide scheme : it covers England, Scotland and Wales. Taking part in it are well over 700 libraries of all kinds, both large and small : the public libraries, municipal, urban district and county ; university libraries ; special libraries of learned societies and institutions, of research, commercial and industrial undertakings ; and government departments. These special libraries range from those attached to large, well-known manufacturing firms to those of small local societies ; from institutions as different as the Bank of England and the B.B.C. ; from Aslib itself to the Ministry of Supply. By agreeing to co-operate these libraries give their readers the benefit of an increasingly valuable service.

For convenience in organization, the country is divided into ten Regions. With one exception, each Region has at its centre a headquarters known as a Regional Library Bureau, which acts in a clearing-house capacity for the applications for the books which are wanted by the libraries in its own and other areas. These Bureaux work in conjunction with the National Central Library, which is the focus of the whole inter-library lending system, and through it with the other Bureaux. In passing, you may be interested to know that this Northern Bureau, serving the counties of Northumberland, Durham, Cumberland and Westmorland, and the Cleveland area of Yorkshire, was the first to be set up.

The main feature and working tool of a Bureau is its Union Catalogue, in which is recorded the non-fiction books to be found in the participating libraries in the Region. By consulting the Union Catalogue, the staff at a Regional Bureau can immediately find out whether a specified book, or specified edition of a book is available in the Region, and, if so, in which library or libraries. These Union Catalogues are duplicated, the second copy being sent to the National Central Library in London to form a master Union Catalogue now containing over 4 million entries.

Let us follow the progress of a request through its various stages until the required book finally reaches the reader. The initial step to put in motion the machinery of inter-library lending must be taken by the reader. But this is only the simple one of making his needs known to the librarian of his local library. The librarian, after making sure that the book is not available locally and deciding that it is not, for various reasons, suitable for addition to his own stock, forwards an application for it to the appropriate Regional Library Bureau. There the staff consult the Union Catalogue and ascertain whether any of the libraries in the Region possess a copy of the book. If so, the application is sent to one of them, and, if the book can be lent, it is then sent direct to the reader's library, where it may be borrowed in the usual way. On the other hand, if the book proves to be unobtainable in the Region, the application is passed to the National Central Library, where one of four things may happen. One, the book may be supplied from the stock of the National Central Library itself; two, it may be obtained by application to another Regional Library Bureau (the application being based on information given in the master union catalogue); three, it may be supplied in response to a request sent to a special library known as an 'outlier'; four, the book may be purchased for addition to the National Central Library's stock and then lent to the borrowing library. And there is even a fifth alternative if the required work is a foreign one which cannot be located in any library in this country. It may be possible to borrow a copy from a library abroad. In parenthesis, the international aspect of inter-library co-operation is an interesting development in librarianship. Recently, libraries in this Region have lent books to libraries in Vienna, Oslo, Prague, Paris and Copenhagen, to mention only a few.

The kinds of books which readers may expect to borrow through inter-library lending are—and here I quote from the preface to the latest Annual Report* of the National Central Library—'highly specialised or expensive books and periodicals which the borrowing library would not be justified in buying, even if it could afford to do so; scarce and out-of-print books, in some cases of considerable age, rarity and value; foreign books of which no copies are available in this country; the back volumes of periodicals; and photographic copies of manuscripts and rare printed books which cannot be lent.' I should mention that the set text-books required continuously by students for examination purposes, and what are known as 'quick-reference' books, for example, current directories, are normally outside the scope of the scheme.

The following may serve to illustrate the type of problem which is solved by inter-library co-operation. A short time ago the Northern Bureau received a request by telephone on behalf of a prominent ship-building firm which urgently wanted a copy of an obscure and out-of-print work on electric motors. The only copy which was available locally was run to earth in the library of the Literary and Philosophical Society. This was surely the most unlikely library to possess it and the last which anyone would have tried in a time-taking trial-and-error search. In this case, the book reached the reader within an hour of the enquiry being received at the Bureau. A word of caution is perhaps necessary here: the system cannot always work so rapidly.

Another enquiry was from a large public library for any information—either in a book or periodical—on a certain kind of uncommon medical apparatus. The information was needed by a reader who had applied for a post in which the successful applicant was to receive a course of training, but it was apparent, however, that a candidate with even the slightest technical knowledge would make a good impression at an interview. Within a week the reader was supplied with two American journals containing articles on the apparatus and two comprehensive books—one an American publication—dealing with the general theory of the subject, and we have since learned that she was successful in securing the appointment. There are three things to which I should like to draw your attention in this illustration. One, the public library concerned had no information on the subject; two, such a specialised field of knowledge was quite beyond its scope; and three, the local booksellers could offer no immediate assistance.

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* 1947-48.

In this brief sketch of library co-operation—it is by no means the complete picture—I have only tried to indicate the almost unlimited resources of books and other printed material which are available to all readers, and to outline the service with which library co-operation provides them. It is a low estimate to say that 90 per cent. of the books requested in this way are supplied, and frequently some useful information may be forthcoming to partially satisfy some of the remaining 10 per cent., as, for example, the name of a library where a book which is not available for loan, can be consulted.

May I suggest one point to be remembered from this paper: it is that all readers can use this inter-library lending service merely by making their requirements known to their local librarian. To this I would add the qualification that these requirements should, in the reader's own interests, be described as fully as possible.

In conclusion it can be said that the contribution of a Regional Library Bureau and the inter-library lending system to the information service is to help all participating librarians towards achieving their common ideal of getting the right book to the right reader at the right time.

As a postscript to this paper some reference to the financial aspect of regional library co-operation may be of interest. Under present conditions, each Bureau is self-supporting and dependent upon the subscriptions it receives from the participating libraries in its Region. The basis on which these are calculated and the amount of the individual contributions vary from region to region according to local circumstances. The subscription paid by public libraries is usually based on a sliding-scale so that the resulting subscriptions bear some relation to the population served. For the most part the subscriptions from university and special libraries are arranged by mutual agreement in which the size of the library, as well as the use made of the Bureau's facilities, are guiding factors.

Unhappily, however, this arrangement on a regional basis is now far from adequate to meet the ever-growing demands made upon the whole of the national, inter-library lending system. Despite increases in libraries' subscriptions—in many cases of 200 per cent. and over—the situation with which the Bureaux are faced is a most serious one. In some quarters the solution to the problem is thought to be in the supplementation of Bureaux' incomes by a Government grant, as is already done for the National Central Library itself.

LIBRARY CO-OPERATION IN SCOTLAND

By L. W. Sharp, M.A., Ph.D.
Librarian, Edinburgh University

Edinburgh Conference, 6th May, 1949

(*Summary*)

CO-OPERATION and libraries can hardly help being named together. Those types of organization which have been the chief sponsors of libraries, e.g. the college, the university, the learned society and the public corporation, all contain in themselves the idea of banding together for the good of a community.

As libraries grew and literature increased, library tools came into existence. Bibliographies of all types, universal, subject, trade or national, were compiled, e.g. those by Conrad Gesner and John Bale in the sixteenth century. (Thomas Dempster's *Historia esslesiastica gentis Scotorvm* was published in 1627 but included Scottish writers who were not Scottish and books that were never written: George Mackenzie's *The lives and characters of the most eminent writers of the Scots nation*, published in 1708–22, was more correct if lacking somewhat in imagination!) There were also very early examples of forms of union catalogues which indicated by a numerical code the libraries in which the books could be found: these were essentially tools for library co-operation.

Other forms of co-operation which have been developed to save time, to prevent waste and to improve library service, are co-operative book selection, cataloguing and classification, library exchanges of journals, duplicates and superfluous books, and inter-library loans. These in turn have led to attempts at co-ordination in abstracting through the Universal Decimal Classification, standardization in nomenclature, abbreviations of titles of periodicals, alphabetical arrangement, uniformity in size of catalogue cards and guide cards, agreements as to format, and the rest. Amongst the most modern developments in library co-operation are the use of photographic methods of rapid reproduction for books and journals or unique items which cannot be lent outside the library, and mechanical methods such as the adaptation of the use of calculating machines and punched cards for selection, analysis and statistics.

The need for all these aids has been intensified by the enormous flood of literature now being published, particularly scientific literature in ever-narrowing fields of specialization. Research, too, has extended from the universities to the government and to industry, and service to these is often of first priority. We are, in fact, facing a new Malthusian problem in a world over-peopled with books, where more is written than can be read. Hence the demand for co-operative action to tackle the problem of directing the flood into channels and pipes and to deliver it on tap to the thirsty research worker.

This demand has led to the formation of many new organizations whose names need be no more than mentioned: Aslib; the National Central Library and its younger brothers the Scottish Central Library, the Irish Central Library, and the Regional Library Bureaux; the Library Association and the Joint Committee on Library Co-operation. In the international field are the International Federation for Documentation and Unesco, which have produced useful helps to the location and acquisition of material indispensable to workers in all countries. Other aids are the *World List of Scientific Periodicals,* the *Union List of Serials,* the *Subject Index to Periodicals,* the *British Union Catalogue of Periodicals,* and the *British National Bibliography.*

In this matter of library co-operation it can be claimed that Scotland has its share of credit, for many of these projects were fathered by the Carnegie United Kingdom Trust sitting in Dunfermline town, the members of which were mostly Scotsmen. With intelligent foresight the Trust encouraged these projects, sometimes gave them house and home (e.g. the National Central Library and the Library Association), and at least nursed them with financial help till they were able to live. All the British bodies and works mentioned above owe their present flourishing condition to the Carnegie United Kingdom Trust. It did not, moreover, neglect Scotland, for it established the Scottish Central Library at Dunfermline in 1921.

If library co-operation in Scotland is to be the subject of this talk, three-quarters of it must be devoted to the Scottish Central Library and its associate bodies, the Scottish Regional Bureaux and the Scottish Union Catalogue.

There is no need to go into details concerning its organization or into statistics, since the facts will be familiar when it is stated that it is the Scottish counterpart of the National Central Library. The Trust's help has been doubly valuable in Scotland because Scottish public libraries are hampered by a dual legal basis for burgh and county libraries, and by a restrictive act for the burghs which not only limits the rate that may be levied and subjects them to double rating, but debars them from co-operation altogether by restricting their operations to their own boundaries. (This position has been fought passionately without success by the Scottish Library Association for the past fifteen years or so.) Fortunately, the beneficent Trust established their Scottish Central Library without requiring contributions and financed the Union Catalogue, which the libraries were only too willing to combine to produce.

It is known that the policy of the Trust is to foster its children until they can look after themselves or till they have proved their worth sufficiently to be recognized by the State. The Trust set up in 1947 an Advisory Committee on the Scottish Central Library and this document is of historic importance for library co-operation in Scotland. It defines the objects of the S.C.L. as follows:—

(*a*) To maintain a reservoir of books to supplement the resources of Scottish libraries and to lend, at their request, books for study which cannot conveniently be obtained from other sources.

(*b*) To facilitate, and to act as a clearing-house for, Scottish inter-library loans.

(*c*) To provide bibliographical information to Scottish libraries.

(*d*) To take such other action as will facilitate access to books and the development of co-operation (*i*) between Scottish libraries and (*ii*) between Scottish libraries and libraries outside Scotland in association with the National Central Library.

(*e*) To maintain a Union Catalogue of books in Scottish libraries and strongly stress the desirability of closer co-operation between the University and Special Libraries.

It has perhaps gone some way towards achieving that end as regards the former, universities, under the new constitution, by appointing as trustees the principals of the four Scottish universities.

The report recommended that the Scottish Central Library should be supported by the State and by co-operating libraries, and should be governed by the four trustees above mentioned with an Executive Committee made up of representatives of the co-operating libraries together with a representative appointed by the Scottish Library Association for the Union Catalogue and one representing special libraries to be appointed by Aslib. There is good reason to believe that the Scottish Central Library will get a Treasury Grant on the lines of that granted to the National Central Library. The Trust as a last gesture has agreed to provide a home for the S.C.L. at Fisher Close, Cornmarket, Edinburgh.

Great developments are expected to follow the transfer of the S.C.L. to the capital city where it can expand into a public library lending service, a national bibliographic service and can develop the Union Catalogue. There, also, it will be centrally placed with regard to all the great and small libraries in Edinburgh. Indeed, the trouble may be that our demands on it will grow to such an extent that it will not be able to expand quickly enough. It is hoped that with the co-operation of the special libraries and of research organizations, it will act the part of a Scottish Aslib. The willingness is certainly there. The Dunfermline brand of service can be strongly recommended as prompt and very efficient. Universities and special libraries should make more use of it. Moreover, there is in the Scottish public libraries a greater stock than is realized which is particularly strong in Commerce, Technology, Fine Art and Industrial Art.

Not much space has been left to mention other schemes of co-operation in Scotland: most of it is in Edinburgh and on an informal basis though none the less valuable. Co-operation takes such forms as consultation before buying expensive specialized books and journals (the endeavour being to fill gaps in Edinburgh libraries as a whole), exchange of duplicates, the transfer of books superfluous to needs, the absorption of defunct libraries, e.g. the Henderson Trust library of ethnology and archæology by the University and the Forbes Dispensary at Inverness by the Royal College of Surgeons and the University.

Nevertheless, it is recognized that informal co-operation is not enough. In Edinburgh, on the initiative of Mr. Butchart, a committee has recently been set up. The primary aim is a Union List of Periodicals in Edinburgh libraries, kept up to date by exchange of accession lists or by sending to a central pool which would probably be the Scottish Central Library. The Committee is also interested in a possible co-ordination of purchasing of new periodicals, not only in order to avoid duplication, but also to ensure a better representation of important journals in Edinburgh libraries. Photographic reproduction of articles in current journals is also a possibility. All these schemes would be in co-operation with the Scottish Central Library, but the proposals are at present only tentative. The Committee itself is not yet complete and room can be found for representatives of other interests in particular trades or works, or in Government or private research libraries. Mr. S. H. Tennant, of the Edinburgh Public Libraries, is the Secretary.

It is hoped that the work of the Edinburgh Committee may have the success which rewarded a somewhat similar venture in Sheffield. It should be noted that its formation preceded the Royal Society's recommendation 'that co-operation should commence in local areas and that regional centres should be linked with national and international systems of interchange'. (Royal Society Scientific Information Conference, 1948, Recommendation No. 10.3.) The Committee will work towards the loosening of some of the remaining restrictions on co-operation and so ensure a better service to all Edinburgh libraries. Difficulties and complaints can be brought before it and action will be taken to relieve them as far as possible.

The development of local services has many advantages, such as the saving of cost in time and labour of a postal service and the saving of time on transport. Items urgently required can be recalled by telephone. The trend towards local co-operation also fits in with the tendency on the part of the Government to place connected interests in the same districts and of trade or industry to co-operate in certain favourable conditions, e.g. Glasgow—shipbuilding, and Edinburgh—printing and brewery. There is also a saving of congestion at the centre. Scotland can become a local reservoir; indeed Edinburgh, Glasgow, Dundee and other centres already deliver to the libraries in their surrounding areas.

With regard to service to newcomers most of the large libraries offer the courtesy of their libraries to serious workers for consultation of books on the premises. The loan of books cannot always be so readily given. All libraries co-operate with the National and Scottish Central Libraries to make books available on application through the official body and it is perhaps desirable that this practice should continue. But there are certain facilities for the direct loan of books. The University willingly grants borrowing facilities to all scholars on application and all who have a private or business address are entitled to use the public libraries. There are, of course, some difficulties, especially in those libraries where space is very limited. Privileges to new readers cannot come before the rights of the members of the institutions themselves.

A word of caution should be given. The difficulties of meeting the needs of the scientists are immense. The recommendations of the Royal Society's Scientific Information Conference are of the utmost importance.

It will be a great task to try to put as many of them as possible into practice through co-operation between librarians, but the revelation of the seriousness of the position as revealed in many of the statements is disturbing. It is to be hoped that the first recommendations to be put into practice will be those relating to the refereeing of material submitted for printing with a view to the elimination of all that is third rate. There must also be a limit to the worship of mere accumulation and universal coverage. A world list of all the books ever printed in the world with the locations in all libraries from the British Museum to the village institute is going too far. The need is to cut down, not to expand indefinitely. The scientist now has no time to read all the articles, nor even all the abstracts that he should, and yet the systematic dredging and analysing of everything in the sea (of knowledge) expands more and more. Even in the matter of translations some are beginning to have qualms. Everyone knows the importance of good translations, but here in Scotland it has sometimes been contended that we did not know Turkish, Chinese or Latvian as that left us an excuse for narrowing the field a little. Now we are to be left with no excuse. For these countries, are not progress reports by their own nationals enough?

The position is now that scientists are not content with books or periodicals or offprints or abstracts. There is a demand for preprints and soon there will be demands for microfilm copies of work fresh from the typewriter! Is the poor librarian to catalogue all these forms of the same article? Mechanization is not the complete answer. If analytical indexing be carried too far it defeats its own end by making the search too wide and the material produced too trivial.

Uniformity and standardization can also be carried too far. They defeat their own objects by producing a reaction. We do not want to be Kardexed, Roneoed, Libracoed, even Hollerithed and perhaps Holmstromed into uniform steel and concrete robots with mechanical brains. We still want the lovely room in the Signet Library where the tapping of a typewriter would be desecration and the Haigh Parliament Hall—at least the name and the associations if not the room itself. More important still we do not want to lose our Dr. Dicksons and Dr. Nicholsons, who could not breathe in such a mechanized atmosphere. But this is merely a grumble on behalf of the poor general librarian. Science is the first priority at the present day. It is a matter of life and death for nations and individuals. But memory of the old standards and ideals must be kept for the time when an era of peace comes again and when there is room again for leisure and contemplation.

VOL. 2, NO. 2 ASLIB PROCEEDINGS MAY 1950

PROBLEMS OF AN INDUSTRIAL LIBRARIAN

By D. G. Brown, Ph.D., A.R.I.C.
Imperial Chemical Industries, Ltd., Nobel Division

Edinburgh Conference, 6th May, 1949

PERHAPS the first problem is how to define an industrial librarian; and I am not satisfied that I can do so. However, I know several people who, like myself, have charge of libraries that serve the staffs of industrial concerns, and who, although formally unqualified in library science, have more or less practical experience of the art. Most of our problems arise when we try to adapt fundamental library procedure to the needs of an industrial staff; others arise out of the special activities peculiar to the firm that are most conveniently operated by the library staff. Problems of the first sort have to be considered at the earliest stage, when the library is being set up; and the more carefully and thoroughly they are considered, the more effective the final organization will be. Problems of the second sort, on the other hand, are continually arising; and to deal with them effectively the library must be organized, not rigidly, but so that the few and simple essential principles of its work may be applied with flexibility and alacrity.

I shall try to illustrate these points from the history of the Ardeer factory library. This library was started in 1910, when Sir Frederic Nathan (the works manager) decided to collect and arrange the information in the Research Department, and to index information in published literature. The first attempts, however, were unsuccessful; and Mr. J. Kaiser, the author of *Systematic Indexing*, was called in to install a system suitable to the purposes and material we had in mind. At that time the Research Department's interests were almost entirely confined to the chemistry and technology of explosives; whereas to-day the activities of the Nobel Division of I.C.I. have a much greater range, and include some important developments in fields not touched by the old Nobel's Explosives Company. Nevertheless, the system devised by Mr. Kaiser, and perfected by the enthusiasm of his successor, Mr. Barbour, was so efficient that it remains almost unchanged to-day.

A full account of the development of our library, and of the Kaiser system employed in our information index, is to be found in the *Report of the Third Conference of Aslib* (1926). A shorter and probably more accessible description of our library system was published by Mr. Barbour in *J.S.C.I.*, Vol. 38, No. 3 (15/2/19).

I may repeat here that the system was, and is, designed solely to arrange the material in the Ardeer library, and to index information of interest to the staff, without reference to external sources. In view of the eloquence of many modern advocates of systems primarily adapted for co-operation on the international scale, it should be kept in mind that a library must first serve its immediate customers.

The work of our library is divided, as I said, between the normal procedure of obtaining, filing and circulating books and periodicals, and company affairs, i.e. the handling of unpublished materials such as research reports and other internal productions. Separate departments exist to deal with correspondence and patent procedure. The handling of books and periodicals takes up a minor proportion of our time; most of it is spent on our information index and on the handling of what I may describe for the present as unpublished information.

Our procedure in ordering and filing books and periodicals has no particularly novel features, and would be familiar to any librarian. In passing, however, I should like to mention that I grudge the time that has to be spent in examining these purchases page by page for damaged, misplaced or missing sections. Librarians seem to get an unfair proportion of bookbinder's mistakes. During the search we have occasion to wonder why notices of errata in periodicals are so often inconspicuously inserted in odd corners of subsequent issues. Early correction is certainly desirable; but a separate errata sheet of the kind issued with some annual volumes must be very useful to librarians who bind their own series, and I wish that this practice were universal.

Having obtained and catalogued our books and pamphlets, we have to bring them to the attention of our staff. This is done by announcement in our weekly bulletin, of which we circulate over 100 copies. For a week after their arrival, new books and pamphlets are kept on a special display shelf in the library, and cannot be removed except for overnight use; this gives interested persons an opportunity of examining them, and of arranging to borrow them later, if they so desire.

As far as possible, we try to avoid a mechanical routine circulation of documents. However carefully such a system may be devised, it continually breaks down through failure to notify the library of staff changes, or changes in interests of departments. Matters are not improved by persons who hold up the circulation, or divert it, or go off on holiday with documents. Applications for circulation on special grounds are particularly troublesome; there is always some jockeying for position early in the list, and, of course, everyone considers himself a specialist on some subject. Our experience is that a document in circulation is a document missing from the library; and in view of the difficulty of recovering documents at short notice from members of staff scattered over the whole extent of an explosives factory, our founders insisted that they should be located in the library, and consulted there.

The next main division of our activities is concerned with the upkeep of our Central Index, which is an information index on the Kaiser system. This index has been running since 1911, and now comprises about 800,000 typed 5 × 3 in. cards. The purpose of the index is to give as much information as can be found in the published literature on subjects within a scope limited to the interests of the Research Department. This scope has to be carefully defined, otherwise the index would degenerate into a series of lucky dips into the literature; and once a subject has been taken into the scope, it must be indexed completely.

As the interests of the Research Department have naturally changed and broadened from time to time, this latter requirement has caused some difficulty. Our solution, which is admittedly imperfect, is to review the scope of the index quinquennially, and to arrange the cabinets in blocks representing five years' accumulation of cards. A record is kept of the scope for each five-year period. Unfortunately, important subjects do not wait for the next quinquennial review before demanding attention; and frequently information crops up that covers more than one five-year period. We have to handle such difficulties on the principle that the information should be indexed where it would naturally be sought.

We now come to the mass of unpublished material handled by the library. Some of this, such as minutes of meetings and departmental memoranda, is ephemeral; but most of it is required for reference and permanent storage. These permanent documents comprise manufacturing and analytical methods, research reports, confidential reports from external sources, various brochures compiled for the instruction of the staff, rules and regulations, and a detailed catalogue of instruments and equipment located in the Research Department.

One of the first problems tackled in the organization of our library was the proper recording of experimental work. Where unfinished work may be handed from one person to another, or perhaps shelved for completion at some later date, it is unwise to trust to the memory of earlier workers to fill in the gaps in disconnected memoranda of experiments. Great care was taken in establishing procedures for the proposal, execution, and recording of research work; and it was emphasized that all results had to be stated so that they would be completely intelligible to later workers in the same field. This may appear simple, but a lot of research turns on the discovery of significant differences between apparently identical subjects, and, if repetition of work is to be avoided, its description must be full and exact.

This problem of full and exact description involves the writer's command of language. The average scientific worker drops the formal study of English in his teens, and when faced with the alternative of sacrificing part of his meaning or clouding the whole of it in vague or ambiguous language, he frequently drops into technical jargon, justifying himself by asserting that he will be understood by his readers.

In fact, technical jargon is the most unreliable of all forms of expression, lacking both fixed meaning and authority of usage.

It is a very delicate matter to point out to an author that his literary style has not done justice to his material, but from time to time the effort must be made, and the tendency to write reports in the jargon of the time and place must be continually corrected.

Another question of style arises out of our practice of printing our analytical methods. As well as moulding the various individual compilations into a reasonably uniform style, we have to produce a consistent typographical pattern for them, which I hope is good enough to set a standard for others.

I think I might say a word or two about staff relations in the library.

When an industrial firm sets up a library, there is a risk that it will be staffed by people who are misfits, or have outlived their usefulness in some other department. This tends to give library work the status of a blind-alley occupation, to be shunned by intelligent juniors who think more of promotion than of annual increments; and the staff becomes a more or less static body set apart from the main organization.

This need not be a disadvantage. Provided they keep in touch with current work—and an intelligent interest in the incoming material will enable them to do this—the staff are free to develop a communal pride in their occupation, and they should be encouraged to do so. There is a fashion nowadays of decrying such petty loyalties, and of attempting to replace them by a distant allegiance to some higher organization. I suspect that this has no better justification than administrative convenience, and I do not think it will have any lasting effect. I suggest that time spent on integrating the library staff will be repaid handsomely.

Finally, I think it essential that the whole time and ability of the staff should not be frozen into the framework of routine. If it is, the library will become sluggish in its response to unusual demands or changes in organizations. There must be a strategic reserve ready to be thrown in to deal with those odd and unpredictable jobs which nevertheless turn up so frequently. If this is available, any problem can be tackled with confidence, and it will prove that difficulties need not be synonymous with troubles.

THE PROBLEMS OF THE TECHNICAL SOCIETY LIBRARY

By P. W. Thomas, B.Sc.(Eng.), A.M.I.C.E., F.C.I.S.
Institution of Engineers and Shipbuilders in Scotland

Edinburgh Conference, 6th May, 1949

(*Summary*)

FROM the operating point of view there are two fundamental problems—that of finance and, to a lesser extent, time. Time in any event becomes less important if there is adequate finance. In the case of the library maintained by a technical society, finance is nearly always limited since the library is the private property of the society which is financed by its members' subscriptions. Practically all the other problems faced by the librarian arise from the limitations of expenditure.

The work of the library can be divided broadly into two main fields—the maintenance of the library proper and the answering of enquiries. The limitations under which the library is maintained involve the careful selection of books and journals to be held in stock. Since some of the journals must be bought, that expenditure is recurring. Many technical societies, of course, publish their own transactions and are able to acquire a number of periodicals by exchange. Whilst this does not involve direct payment, the expense of providing additional copies can be burdensome, particularly when paper is limited. Moreover, it is still necessary to exercise discrimination to ensure that the exchanges are of value to both parties.

It is necessary that the scope of the library should be somewhat broader than the scope of the majority of its readers to allow for enquiries on the fringe of the main subject. It is necessary, also, to watch developments to ensure that information on topical subjects is available.

The appointment of an adequate qualified staff is practically impossible since the cost of the staff must form part of the cost of the library. Very often, therefore, the library can only be kept up to date by the use of clerical staff instead of librarians, and leaving the specialized knowledge to be provided by some member of the staff not primarily concerned with the library.

The question of staffing is also of considerable importance in dealing with enquiries submitted from readers. To an increasing extent it is found that enquirers are unable to read technical literature in foreign languages and, if the library allocation is not substantial, it is impossible to employ linguists on the library staff. Moreover, many enquiries are not well framed and the first duty of the library staff is to discover what information is really wanted rather than to be of immediate assistance to the enquirer.

Co-operation between libraries is particularly desirable in the field of technology and may become even more necessary in the future when libraries outgrow their storage space, and the extent to which journals shall be retained becomes of paramount importance. Some sort of agreement between libraries on a regional basis whereby each would undertake to maintain a file of certain periodicals might ensure that too much storage space would not be absorbed by maintaining several files of each of the less frequently read periodicals.

THE TRAINING OF THE INFORMATION OFFICER

Manchester Meeting, 28th January, 1949

(*Reported*)

A MEETING of the Northern Branch was held in the Lecture Theatre of the Manchester Central Library on 28th January, 1949 : the Branch Chairman, Mr. R. Brightman, presided.

The meeting was arranged to give an opportunity for the further discussion of the subject of the training of information officers which had formed one of the main topics at the September 1948 Aslib Annual Conference at Ashorne Hill. The three papers then presented were the Memorandum prepared by the Aslib Education Committee, 'Some observations on the training of an industrial information officer', by Mr. J. S. P. Paton, and 'The training of the information officer', by Mr. F. G. B. Hutchings. All these were printed in *Aslib Proceedings*, Vol. 1, No. 2. In addition, those present at the Manchester meeting took into consideration the article, 'Second thoughts', which appeared in *Aslib Information* in October, 1948, and also section 11 of the *Recommendations adopted by the Royal Society Scientific Conference*, 1948, which referred to the 'Qualifications of special librarians and information officers'.

The subject was introduced by Mr. A. H. Raine, of Messrs. Brotherton & Co., who reviewed the discussion at the annual conference and then went on to sketch the relationship between the Library Association and special librarians, with particular reference to the Library Association's revised examination syllabus.

Extract from Mr. Raine's paper.

There are three examinations :—

(1) *Entrance examination*

'The examination is intended to assess the suitability of the candidate for librarianship.' According to the *Year Book* this can be taken only after a year's work in an approved library.

This examination has no feature relating to special librarianship. On the contrary, it requires a knowledge of many reference books which will very rarely be found in industrial special libraries.

(2) *Registration examination*

'This is the general professional examination as a result of which successful candidates who . . . have had three years' experience in an approved library, will be eligible for registration as Chartered Librarians.'

There are four parts, two of which have no reference to special libraries. The third requires all candidates to answer questions on 'the organization, administration and functions of libraries (public, university, special—

including information bureaux).' The fourth gives a choice of subjects, viz. :—

(*a*) history of English literature ;
or (*b*) literature of science ;
or (*c*) literature of social and political ideas.

'There will be required in (*b*) a knowledge of the great discoverers and their discoveries, and the conspicuous books in and on the subject.'

(3) *Final examination*

'This is designed to test the mature judgment of the candidates.'

It is in four parts. Only two of these give recognition of the needs of special libraries. These are :—

2. Library organization and administration :—
   1st paper : General
   2nd paper : (*a*) public libraries ;
   or (*b*) university and college libraries ;
   or (*c*) special libraries and information bureaux.

3. Subject approach to the literature of the arts and sciences. In this, one of the options is 'literature and librarianship of science and technology'. This comprises a paper on 'general science' and a second paper chosen from :—

(*a*) mathematical and physical sciences ;
or (*b*) chemistry and chemical technology ;
or (*c*) natural history and biological sciences (excluding medicine) ;
or (*d*) engineering and building technology.

This examination suggests to me that it will be for the candidate an obstacle race, in which he will be relieved to be allowed to have two sprints.

Let us now leave this syllabus and attempt to classify the human element involved. I see four main divisions :

(*A*) The head of the information department of a large research or industrial organization.

(*B*) The librarian in such a department.

(*C*) The entrant from school or elsewhere.

(*D*) The intelligence (or information) officer and librarian responsible for the information service of a relatively small organization.

For the sake of brevity I shall refer to these by the letters A, B, C, or D.

There is general agreement regarding the functions, responsibilities and training of categories A and B. Recommendations as to their status were made by the Royal Society.

The paper by J. S. Paton deals in detail with A. It brings together the opinions expressed in a number of Aslib papers and discussions. It is a good example of the output of an information officer, as defined by Hutchings, whose 'work is primarily to assess printed or other reproduced matter'. For this category, however, Aslib does not propose any immediate action and even the revised L.A. syllabus is unlikely to have any great appeal.

The main purpose of F. G. B. Hutchings' paper appears to be the defence of B's position. It makes no pronouncement on the claim made by Paton that A should have seniority. Even if we grant this, B would still have complete control in the library. The relative positions of A and B in the information department would be like that of master and chief engineer in a ship, where each is a specialist in his own sphere.

It is for B that the syllabus of the L.A. is being modified. It may be that the modification is not sufficiently drastic. It should certainly be reviewed in due course in the light of experience gained.

The Aslib memorandum is sympathetic towards C. 'To prevent their posts from becoming dead ends (incidentally with the loss of some promising recruits to the information world), they should be able to look forward to obtaining a sound qualification in the technique of their work.' Paton, however, rather brusquely dismisses their claim to consideration.

We have to consider how far the revised syllabus of the L.A. would help the young entrant on his progress towards category B. It will be hard going and many will fall by the wayside. For the junior in a special library, it will be harder than his opposite number in a public or university library because his formal training will be more remote from his daily experience. Moreover, this course can only apply to the assistant in the library of a large organization.

With category D the position as regards training and qualification is entirely different. I would go so far as to say that the interests of D have been completely ignored.

I submit that the number in category D far exceeds the number in A and B together. There must be hundreds, probably thousands, scattered up and down the country. I would venture to guess that they are more numerous in the area of the Northern Branch.

A short time ago there was a conference on 'Research and the smaller firm'.[1] I think that a comparable discussion on 'Information services and the smaller firm' is overdue.

There may be (and should be) an information officer even where there is no research department as such; there may be one or two full-time research workers. Even if there is no full-time research worker, an information officer is worth while. Here I disagree with Paton's reliance on the research association.

The accommodation and resources allocated to the information service may not be liberal. The staff may be on a small scale, possibly one assistant plus the services (part-time even) of a stenographer.

I am told that some information officers do not even have a library, a deplorable state of affairs. What is certain is that whatever library is provided, the information officer will have to be personally active in the routine duties.

Our information officer must have at his disposal, therefore, all devices and techniques which will facilitate, nay, make possible, the satisfactory

[1] Conference arranged by the Manchester Joint Research Council, 16th October, 1946. For summary, see *Nature*, 2nd November, 1946, Vol. 158, No. 4018, pp. 638–9

accomplishment of his manifold duties. Certainly he must not learn his technique by trial and error. Aslib is of immense help to him at all times. In addition Aslib is publishing valuable materials, e.g. Wright's *Manual* and such booklets as that written by our Branch Chairman.[2]

What sort of person, then, is D? He is most certainly a graduate, with works and laboratory experience. At this stage I should like to quote from a collection of papers given at an educational course of the Pittsburgh Chapter of the Special Libraries Association.[3] I thoroughly enjoyed reading this collection and make no apology for quoting.

'Sooner or later every institution owns some books. Books have a way of occupying space. They have little compressibility, and sooner or later they overflow the space that has been assigned to them. Sooner or later some of them get lost. Sooner or later the task of finding any information in them requires more time than an executive cares to take. When that situation develops, the executive thinks of his favourite library where everything moves according to appointment. He begins to dream of Utopia where all his questions may be answered even as they enter his mind. Then he decides to add a librarian to his staff. Somewhere between the mess that he has on his hands, and the perfect library of which we all dream; somewhere between reality and the ideal each one of us finds his place.'

'There are three main ways by which librarians are likely to enter the special field. They go in as assistants, they fall heir to an organized library or they go in alone where nary a librarian has ever been before. Fortunate is he who goes in as an assistant. Volumes have been written on training special librarians, but of all the ways of instruction, apprenticeship in a good library under a good teacher tops the list.'

We are now in a position to state the need of D and to assess the assistance afforded by the L.A. and Aslib courses of training. Briefly, what D needs is a short-cut to the acquisition of a working knowledge of those parts of library technique which have a bearing on special librarianship (classification, indexing, reproduction, punched cards, etc.).

The conscientious information officer (variety D) has also a duty towards his junior staff. The latter should have facilities for becoming proficient in library technique. A junior should be able to transfer, possibly to a similar establishment.

On the applicability or adequacy of the training and examination schemes I do not propose to add to my previous comments. Neither have I prepared any counter proposals. That would be outside my terms of reference.

Miss Exley (Boots Pure Drug Co.), in outlining the modified Library Association syllabus, suggested that the modified syllabus would enable the special librarian to acquire all that might be required in the way of a professional qualification. The distinction between special librarians and information officers could not be clearly drawn and both might require to use similar techniques.

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[2] *Reference books for the works library*, by R. Brightman. Aslib Pamphlets No. 2, 1948, pp. 21. 2*s*.

[3] *The organization and administration of a special library.* Annual Education Course, 1943. Pittsburgh Chapter, Special Libraries Association.

Dr. Fairbairn (I.C.I. Dyestuffs Division) welcomed the modified syllabus as opening the way to a professional qualification, where required, for a special librarian. The information officer, he thought, was on a similar footing to other specialist officers in an industrial firm, such as safety officers, personnel managers, etc., and would build the technique required on an independent academic qualification acquired earlier. No specific professional qualification was needed.

Miss Cole (Bibby & Sons) in a written contribution, urged that Aslib should assist with training courses for Mr. Raine's fourth category, which might also serve the needs of information officers in larger industrial concerns and their recruits. This would not compete with the activities of the Library Association. She did not advocate a 'qualification'.

Of the twenty-nine members present thirteen took part in the discussion. Strong support was forthcoming for such schemes of training as are outlined in *Aslib Information* for January, 1949, but while a number of members were already impressed with the value of the modified Library Association syllabus in providing the way to a professional qualification in librarianship, whether in public or industrial libraries, provided the examinations were conducted on a broad basis and the examiners did not overlook the conditions of candidates from outside the public libraries, there was no support for the institution by Aslib of a distinct qualification, post-graduate or otherwise. The suggestion was made that examiners should be drawn from other occupations than those of public libraries, but strong desire was evinced for the closest co-operation between Aslib and the Library Association.

The discussion to some extent clarified the confusion between 'qualification' and 'training', but did not attempt to elucidate a distinction between 'special' and other types of librarians or between 'special librarian' and 'information officer'. Nor were the implications of professional and academic training or discipline considered.

While no evidence was forthcoming on the quantitative side as to the magnitude of the demand for training of those entering industrial and other libraries, whether as juniors or as graduates, the meeting was unanimous as to the need for training courses for persons in single subjects or groups of subjects, if possible, associated with the Library Association's examinations, and sponsored by Aslib in co-operation with any other educational organization which was willing to help in providing them.

Vol. 2, No. 2 ASLIB PROCEEDINGS May 1950

THE ORGANIZATION OF WORKS VISITS

By F. C. Jennings
Dunlop Rubber Co., Ltd.

Liverpool Meeting, 9th December, 1949

(*Summary*)

Précis

THE organizing and carrying through of a works visit is a practical exercise in the presentation of technical information. The first rule should be to attract and then maintain the visitors' interest. This involves estimating the background and objectives of the visitors, and directing the visit accordingly. For most visits, the manner and matter must be simplified, only a relatively few or the important points should be made.

A successful arrangement has been found to be to follow the tour of the works by a simple technical exposition of the process and product.

Basic considerations

Visitors come to most factories but it would seem that there is less sight-seeing visitation by the general public since the war because many factories have not resumed their pre-war policy in this direction. The reasons for this are not relevant to the purposes of Aslib.

A large proportion of visitors is for practical purposes ignorant of some if not all of the basic features of the factory process or product and can be treated as general visitors. Nevertheless, the special interest of each party must be discovered and the visit conducted accordingly.

Planning the visit

The first consideration is how many can be accommodated at a time, and while obvious factors such as the room available to gather the party together will be pertinent, there are other important ones. As the purpose of a works is not primarily to provide a spectacle for the casual sightseer, it is necessary to decide the optimum number which can be guided in one coherent group around the plant. Is there space for them to stand, and will they all be able to hear what is being said to them ? When the number per group has thus been decided, it must be multiplied by the number of guides available to give the size of party which can be accommodated.

This number is advised to the intending visitors and a date decided upon. It is often desirable to send them clear instructions how to reach the works and whom to ask for when they arrive. It is useful also to give them an idea how long the visit will take.

The arrangements in the works should be planned carefully, a time schedule made and given to everyone concerned directly or indirectly.

Touring the works

When the party arrives, collect it together in one room where they can sit down and then let one of the senior officials give them a word of welcome and, if possible, a few introductory remarks such as how many people are employed, special points on welfare or worker-management relations, and so on. This is the point to introduce any special features about the firm, how old or young, or big or important it is, or the founder's name and achievements.

It is important, then, to outline the manufacturing process, briefly, concretely, and in simple terms, taking care to explain the essential steps and to describe any machine or operation which for any reason cannot be properly explained during the tour.

These brief remarks should be over in ten minutes or, at the most, a quarter of an hour, and if properly done can make an important contribution to their enjoyment and understanding of the visit.

The guides should then be introduced by name, the schedule described, and the tour begun.

What are the attributes of a good guide? His first job being to talk, his voice should be loud enough, and his second job is to talk accurately and, if in addition he has a pleasant, engaging manner, he was born to be a guide.

An outstanding difficulty for the average visitor is the strangeness of the machines and his unfamiliarity with the materials they use. For this reason, it is best to proceed as far as possible from the known to the unknown.

Consider, therefore, where the tour is to begin. The beginning of the process is not necessarily the best beginning for the visitors. It is frequently better to start the tour with the finished product, because it is usually the something known, and to work back to the raw material which is often unknown and may be incomprehensible to the general visitor.

Technical exposition

Even with the best of guides, the nature of a walking tour of the works combined with the noise of machinery makes it impossible to explain all that should be explained about either the process or the product. That explanation must be done in a quieter atmosphere. It is wise also not to keep the party on its feet for too long; perhaps an hour or ninety minutes should not be exceeded. Then they should be allowed to sit down and be offered some refreshment.

We have found that if this short respite be followed by an explanation, in simple terms, of the leading technical aspects of the process and product, a desirable climax to the visit is secured. Three things should be attempted in this technical exposition: (1) an explanation of the underlying principles of the process which the party has just seen in action; (2) the properties and uses of the product; and (3) your hopes and expectations for the future.

Of course, the 'technical talk' requires careful preparation and the selection of suitable persons to do it. In our factory, the technique of this part of the visit has been the subject of some thought and experiment, which is still continuing and might well form the subject of a future paper in another place.

The general approach, aim, and atmosphere will depend to some extent on the nature of the party concerned, but one thing is essential: a speaker or speakers who can talk interestingly and accurately but at the same time popularly on what may be to his audience recondite technicalities. It adds greatly to the interest if simple illustrative experiments are carried out and if actual exhibits of the product are made.

The speaker must be a technical man though experience shows that there are few laboratory men who are able and willing to present their work or their knowledge clearly and interestingly to the man-in-the-street. Indeed, their training is such that they abhor talking about their work in anything but the jargon of the classroom or textbook. To be quite fair, some of them could do it if they tried, but their contempt springs from the knowledge that the language needed would introduce shades of meaning which would blur the sharp edges of the scientific truth in which they are accustomed to deal.

A useful device, if time is available, is to present the story in short sections, each given by one of the experts and linked together by a chairman or compère. Thus, the basic chemistry would be dealt with by the chief chemist, the design of the product by the chief designer, and the method of application of the product by the development engineer. The compère would then relate all this to the general life of the community and to the particular interests of the audience.

There is not often sufficient time for such an elaborate treatment, so a single lecturer is more usual. The experts can be present to deal with questions.

The lecturer should strive for a vivid presentation and though he will try to accommodate his matter to the particular audience, observation of the technique of a successful works' lecturer has shown that there is not so much difference as might be expected between even the 'popular' and the scientific audience. Out of his field, the scientist needs treating almost as gently as the non-scientist.

The important thing is to concentrate on two or three leading points only—the art being in leaving out rather than putting in. The lecturer must be quite clear in his own mind what these points are and must prepare carefully the way in which he intends to make them.

Experience has shown this final technical exposition to be much appreciated and to take the works visit out of the realm of a mere spectacle and make it a definite piece of adult education and information. It must be an honest, sincere appraisal and description of the process and product.

After the lecture and the ensuing questions, the proceedings will be brought to a close, and the party given an opportunity to voice its thanks

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LONDON MEETINGS, 1949-50

CONTENTS

PAGE

PREFACE 103

5th October, 1949

TWO SPECIAL LIBRARY PROBLEMS.

1. AN INTRODUCTION TO THE LIBRARY AND INFORMATION SERVICES OF A PROFESSIONAL INSTITUTION.
   W. G. WATTS (Librarian, Institution of Mining and Metallurgy). . 105
2. PUBLICITY IN THE KODAK RESEARCH LIBRARY.
   B. CHIBNALL (Librarian, Shell Film Unit, formerly of Kodak, Ltd.) . 108
3. THE BEST USE OF LIBRARY STATISTICS.
   C. W. HANSON (Information Officer, British Scientific Instrument Research Association) 110

2nd November, 1949

SCIENTIFIC INFORMATION.

1. THE ACTIVITIES OF THE 'KING COMMITTEE'.
   DR. ALEXANDER KING (Chairman, Technical Information Services Panel) *Reported*. 115
2. THE WORK OF THE INFORMATION SERVICES COMMITTEE OF THE ROYAL SOCIETY.
   DR. D. C. MARTIN (Assistant Secretary of the Royal Society) . 117

2nd December, 1949

UNESCO/LIBRARY OF CONGRESS BIBLIOGRAPHICAL SURVEY
Reported 127

6th January, 1950

FORMS OF QUESTIONNAIRES: THE EFFECT OF DRAFTING ON THE RESULTS OBTAINED.

1. THE DRAFTING OF QUESTIONNAIRES.
   ROBERT J. E. SILVEY (B.B.C. Listener Research) *Reported* . . . 129
2. THE LIMITATIONS OF QUESTIONNAIRES.
   D. L. LAMBERTH (Social Survey, Central Office of Information) . 131

8th March, 1950

NATIONAL BIBLIOGRAPHIES.

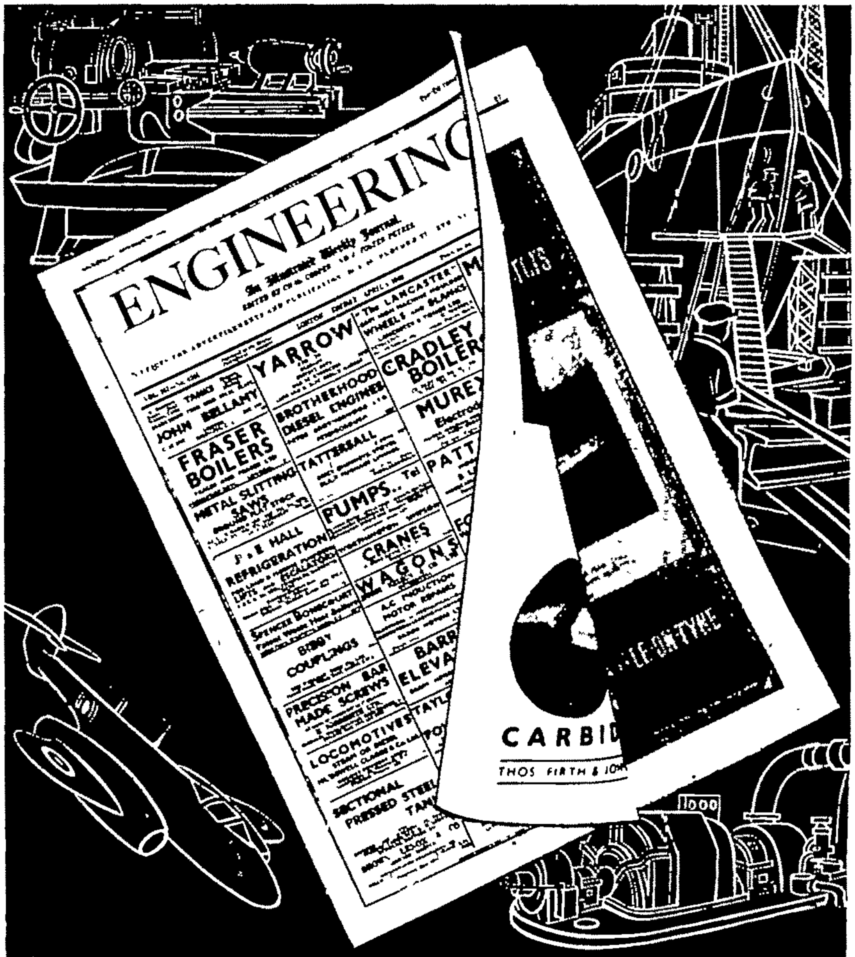
1. THE BRITISH NATIONAL BIBLIOGRAPHY.
   F. C. FRANCIS (British Museum) 139
2. CATALOGUING OF GOVERNMENT PUBLICATIONS.
   T. C. D. EVANS (His Majesty's Stationery Office) *Summary* . . 146

THE WORK OF ASLIB, July 1948 to December 1949 149

BRITISH UNION CATALOGUE OF PERIODICALS.
Sixth Annual Report of the Council for the year ending 31st March, 1950 161

APPENDICES 165

CALCUTTA



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ASLIB PROCEEDINGS

Volume 2 August, 1950 Number 3

PREFACE

THIS issue covers the six winter meetings organized by Aslib in London during the period October, 1949, to March, 1950. Of these, the February gathering took the form of visits to the library of the Department of Scientific and Industrial Research, and was reported in the February issue of *Aslib Information*. The other meetings, by courtesy of the Institution of Electrical Engineers, were held as before on their premises and Aslib is very appreciative of this help.

This issue also includes the work of Aslib, July, 1948–December, 1949, and the Annual Report and Accounts of the British Union Catalogue of Periodicals for the year ending 31st March, 1950.

Vol. 2, No. 3 ASLIB PROCEEDINGS August 1950

TWO SPECIAL LIBRARY PROBLEMS

London meeting, 5th October, 1949

THE two problems discussed at this meeting were, first, 'Putting the special library over to its users', to which Mr. W. G. Watts and Mr. B. Chibnall made the contributions printed below; and second, 'The best use of library statistics', when Mr. Hanson's paper was supplemented by Mr. D. C. Henrik Jones, who spoke of the Library Association's experience in trying to draw up a standard form of statistics for public libraries. The Chairman of the meeting was Mr. J. E. Wright, Librarian of the Institution of Electrical Engineers.

1. AN INTRODUCTION TO THE LIBRARY AND INFORMATION SERVICES OF A PROFESSIONAL INSTITUTION

By W. G. Watts

Librarian, Institution of Mining and Metallurgy

THE Library and Information department which I represent is a joint one of two professional Institutions, the Institution of Mining and Metallurgy, and the Institution of Mining Engineers. Both Institutions possess Royal Charters and were founded in the late nineteenth century, the former for the advancement of the science of economic geology, mining and extraction metallurgy of all minerals other than coal, and the latter for the advancement of the science of coal and iron ore mining and allied subjects. The Institution of Mining Engineers is slightly the older institution.

The joint library is a considerable one, having been started by the Institution of Mining and Metallurgy at its inception and having incorporated the library of the Institution of Mining Engineers in 1924. The stock is now approaching 30,000 items, including books, pamphlets, maps, and bound sets of periodicals, covering the whole mineral field.

In March, 1949, we published a pamphlet entitled *Library and Information Services available to all classes of membership of both Institutions.* It would have been simpler to say 'to all members of both Institutions', but the term 'member' is used by the Institution of Mining and Metallurgy to denote a full member of the Institution. The pamphlet consists of eight quarto pages and is folded down the centre for insertion with any of the monthly publications of either Institution.

The contents consist of:—

(1) A brief description of the Joint Library together with details of the card catalogues and indexes, and a description of the loan service.

(2) Notes on the photocopying service.

(3) Details of the publication of the *Index of Recent Articles*.

(4) Notes on translations.

(5) A note on the Information Service.

(6) The address and telephone numbers of the library.

(7) An outline of the U.D.C.

(8) A list of journals received in the Joint Library together with their abbreviations. (These are used in the *Index of Recent Articles*.)

There are several reasons that led us to issue this pamphlet and one of the chief was the change in the classification used for the *Index of Recent Articles*. The Institution of Mining and Metallurgy has published, for over fifty years, in its monthly *Bulletin*, an annotated index of papers, books, etc., on economic geology, mining, mineral dressing, extraction metallurgy, and chemical technology of all minerals and metals, under the general title of *Index of Recent Articles*.* This index included items relating to coal mining until July, 1946, when the Institution of Mining Engineers published the coal section as a supplement to the monthly parts of their *Transactions* (Index of Recent Books and Articles on coal mining and allied subjects.) These index entries were classified by alphabetical subject headings such as 'Mining methods—Mechanical' and this method of classification was also used in the large card index in the library. Late in 1948 the decision to change to the U.D.C. was made and from March, 1949, the index entries in the *Bulletins* were classified by the U.D.C. As the indexes are widely used by members of both Institutions, and in the case of the Institution of Mining and Metallurgy by members scattered all over the world, and also by many organizations and bodies, it was felt that some explanation should be given of the new classification which, after all, is entirely different from the old classification.

The other reasons for the issue were ones that must have been experienced in many other libraries. New members would write, or call, to ascertain what facilities we could offer. Existing members would also ask the same question and we felt that many did not realize what Library and Information Services were available, particularly as so many members of the Institution of Mining and Metallurgy are resident overseas, either permanently or for long periods.

The production of the pamphlet presented no special difficulties. The quarto size was adopted as octavo proved too small for the layout of the U.D.C. tables. Sufficient copies were produced to issue a copy to every recipient of the *Bulletin* or *Transactions*, and to provide a surplus for issue to new members. Some members of Aslib may be interested in the cost of paper and printing. This amounted to £67 10*s*. for 7,500 copies and was divided equally between the two Institutions.

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* From July, 1950, the *Index of Recent Articles* has been superseded by *I.M.M. Abstracts*.

It is intended to issue a new and revised edition in the near future. For this reason a large number of surplus copies were not produced in the first printing.

The pamphlet has had an extremely good reception and I feel that it has amply fulfilled its purpose by being both useful and informative. There has been a definite increase in the number of loans and a much larger rise in the number of enquiries dealt with on the Information side. There has also been a widespread interest in the U.D.C., both from our members and from bodies and institutions overseas, and in this connection I am now endeavouring to establish some kind of international co-operation in the documentation of mining and its allied subjects.

2. PUBLICITY IN THE KODAK RESEARCH LIBRARY

By B. Chibnall

(Librarian, Shell Film Unit, formerly of Kodak, Ltd.)

THE Kodak Research Library is intended to serve the staff of the Research Laboratories in which it is established. This staff numbers about 70 to 80 graduates and about 100 or more other staff.

The laboratories form part of a larger factory establishment of 150 to 200 technicians and 2,500 others.

The library was established at the same time as the laboratories, 21 years ago, and in the first place it was designed to serve only the laboratories' staff and the management. However, many of the laboratories' staff have taken posts in the factory, and once having used the library, continue to do so after their transfer. As a consequence the service to the factory grows steadily.

As the library has always been part of the laboratories it has been possible to maintain close contact with the laboratories' staff and I think that this is perhaps a distinguishing characteristic of many industrial libraries. There is little doubt that such personal contact is by far the best way of putting the library across to its possible users.

The laboratories have grown by now so that new members of the staff may not easily find their way to the library. It has therefore been arranged that all new graduates and other new staff, if they wish, are brought to the library during their first few days.

On this occasion they are introduced to the library staff and shown the layout of the library and the various bulletins which are issued. A brief outline of the U.D.C. is also given. The new member is encouraged to return to the library whenever he has any sort of query. The scope of the library is not overstated as it is most important that the library does not attempt too much in an endeavour to publicise itself. Queries badly answered are very damaging to a library's reputation.

Thus it is clear that the Kodak Research Library greets its customers early on and our main effort subsequently is devoted to keeping the library running in such a manner that people are encouraged to return to it after once having used it.

The library issues three bulletins: an accessions list of published material, an accessions list of confidential reports together with brief indicative abstracts, and a bulletin of abstracts of articles of photographic interest in British journals. Each of the accessions lists has a covering sheet which can be detached and returned to the library as a request form for particular items listed. This makes it easier for the user to request items and saves a large number of incoming telephone calls. The confidential accession list and the abstract bulletin are both printed in such a form that the individual items can be cut out and mounted on 5 in. × 3 in. cards if people wish to keep their own reference index.

If the atmosphere of the library is to encourage people to return it is essential that the staff should be helpful and pleasant. All members of the Kodak Library staff are encouraged to take Library Association courses and examinations. Despite the many criticisms which can be made of the courses those members of Kodak Library staff who have completed them have found them of the utmost value in helping the full exploitation of the resources of their own and other libraries.

3. THE BEST USE OF LIBRARY STATISTICS

By C. W. Hanson, B.Sc.

Information Officer, British Scientific Instrument Research Association

As officer in charge of an Information Department which incorporates a special library, I value and use any statistical data which can be employed to provide a guide to policy and an objective check of personal judgments; but I can speak on the subject only as an amateur since I am neither a librarian nor a statistician.

Before proceeding further, let me make two general observations. First, statistics are not a substitute either for experience or for the exercise of judgment. They provide a factual basis on which, in the light of experience, wise judgments can be made. Thus numerical records may show that a particular class of library material—say patent specifications—is seldom consulted or borrowed; but that does not automatically force on the librarian a decision to cease to acquire or hold such material. He may know that the need, although infrequent, is both important and urgent when it does arise. He must weigh the need for the service against the cost of providing it. This he can do better if he knows accurately, from his records and statistics, the cost of acquiring and processing his specifications and their frequency of issue than if he has to depend entirely upon his general impressions. The *quality* of the demand he must assess himself; but the *quantity*, and the cost of meeting it, are amenable to measurement, and he will be wise to make such a measurement before taking his decision.

In general, I would say that when something is amenable to measurement, measure it; and reserve subjective assessment for those factors which cannot be measured. There is plenty of scope for the exercise of personal judgment in deciding what action, if any, to take after the relevant figures have been compiled and analysed.

The second general point I must make is that the kind of statistics with which I am dealing have severe limitations. They are nearly all methods of assessing future needs by measuring past demands. Such methods are valid and useful, but not fundamental. For instance, they do not reveal actual needs at the time they arise, nor enable us to discern at once new needs.

They throw no light upon the problem of measuring the value of our services to the people we serve or of comparing them with other methods of securing information. The solution of these problems must await the development of a suitable technique of operational research.

Leaving these general considerations, I will now deal more specifically with the subject of this talk.

Statistics in a special library have four main uses: one, as a guide to policy; two, as a measure of the use made of the library; three, as a measure of the work done; and four, as a measure of the relative efficiencies of different internal systems.

(1) *Guide to Policy*

Library policy should not be merely conventional—that is, similar to the policy of other libraries. Each library is unique, and its policy must be determined by the particular circumstances in which it exists and by the special needs of its users. In so far as these circumstances and needs can be assessed objectively, the policy can be decided on a firm basis.

How many users are there? Do they use the library personally or by post? The answers to these questions affect the size of the library and its arrangement, e.g. the provision of space for reading or of space for packing. How is the demand divided between books, journals, pamphlets, etc.? These figures provide a guide to purchasing policy. A heavy demand for journals by post may suggest the desirability of keeping them unbound so as to reduce postage costs and to avoid the necessity for depriving the library of a whole volume when only one part is needed; or it may suggest the introduction of a photo-copying section or the acquisition, for loan, of reprints. Are enquiries mainly for identified documents or for information about particular subjects? This affects the choice of staff—librarians or people with subject knowledge.

In an established library the librarian will be able to give answers to these and other questions on the basis of his general impressions. But the general impressions of even the most experienced person are liable to be faulty or inaccurate, and although in the end policy decisions must be based upon personal judgment, that judgment will be sounder if it is based upon a numerical assessment of the factors involved. The compilation of the necessary statistics is not as burdensome as it might seem at first sight, since many of them can be derived from records which are necessarily kept in the course of the day-to-day work of the library.

(2) *Use made of the Library*

Nearly all libraries keep a record of the total number of their loans both in order to be able to show some numerical justification for their existence and in order to make comparisons between one year and another. I need not, therefore, stress the obvious value of such records.

Of equal value, I think, but less often compiled, are statistics showing the proportions of those entitled to use the library who, in fact, do so; and the distribution of loans, or other forms of usage, between individual users or classes of user. The size of the clientele will determine how far such records can be dissected to show the usage of the library by each individual or organization. Where this can be done it reveals at once those who are entitled to use the library but do not do so at all, or do so only to a less-than-average extent. Steps can then be taken to bring to their notice the services offered by the library and thus to reduce the risk of non- or low-usage for any reason except actual absence of need. In my organization, where the numbers served are small (110 member-firms and 70 staff) this detailed dissection of usage figures has been possible, and personal contact with infrequent users has often resulted in them becoming heavy users.

I might mention one interesting point which our figures have revealed: the great influence which changes in staff in a borrowing organization sometimes have upon the usage of our library by that organization. Thus, Firm A borrowed 19 items in one year and none the next, whereas Firm B borrowed 5 items in the first year and 29 in the next. The reason was found, on enquiry, to be that the technical chief of Firm A had left to join Firm B. Such instances have shown us the desirability of drawing fresh attention to the services our library offers when changes take place in the borrowing staff of member-firms.

(3) *Measure of Work Done*

It is desirable to have some measure of the amount of work done by a given number of staff—or perhaps I should say the number of staff needed to carry out a given amount of work, so that reasonably accurate estimates can be made of the time required to carry out particular jobs, or of the staff needed to undertake additional activities. Can the existing staff undertake as an 'odd job' the compilation of a subject index of 500 research reports? Will it take one person a week or a month or six months? An increase from 200 to 400 in the number of journals received by the library will involve just how much additional work in processing, circulating and perhaps abstracting them? Enough to justify an additional assistant? or two? Even experienced people are liable to find these kinds of questions very difficult to answer; but simple records of numbers of loans, accessions, etc., and of the number of people handling them will enable forecasts to be made of the staff needed to handle expansions of normal work. Forecasting staff needs for special jobs or for new kinds of activity is more difficult since there are no past records or experience on which to base estimates. In these circumstances it is wise to make a deliberate timed trial.

My excuse for making such obvious suggestions is that I have known people in charge of small special libraries who got themselves into unnecessary difficulties through failure to make just such elementary calculations as I have suggested. Thus one man planned a full library service—buying, accessioning, cataloguing, indexing, journal circulation, literature searches, an enquiry service and the rest—which would have needed a staff of four or five to provide, and tried—in spite of attempts to dissuade him—to operate the whole of it himself, with the almost inevitable result that the users got no useful service of any sort and the librarian had a nervous breakdown and had to be transferred to other work!

(4) *Efficiencies of Internal Systems*

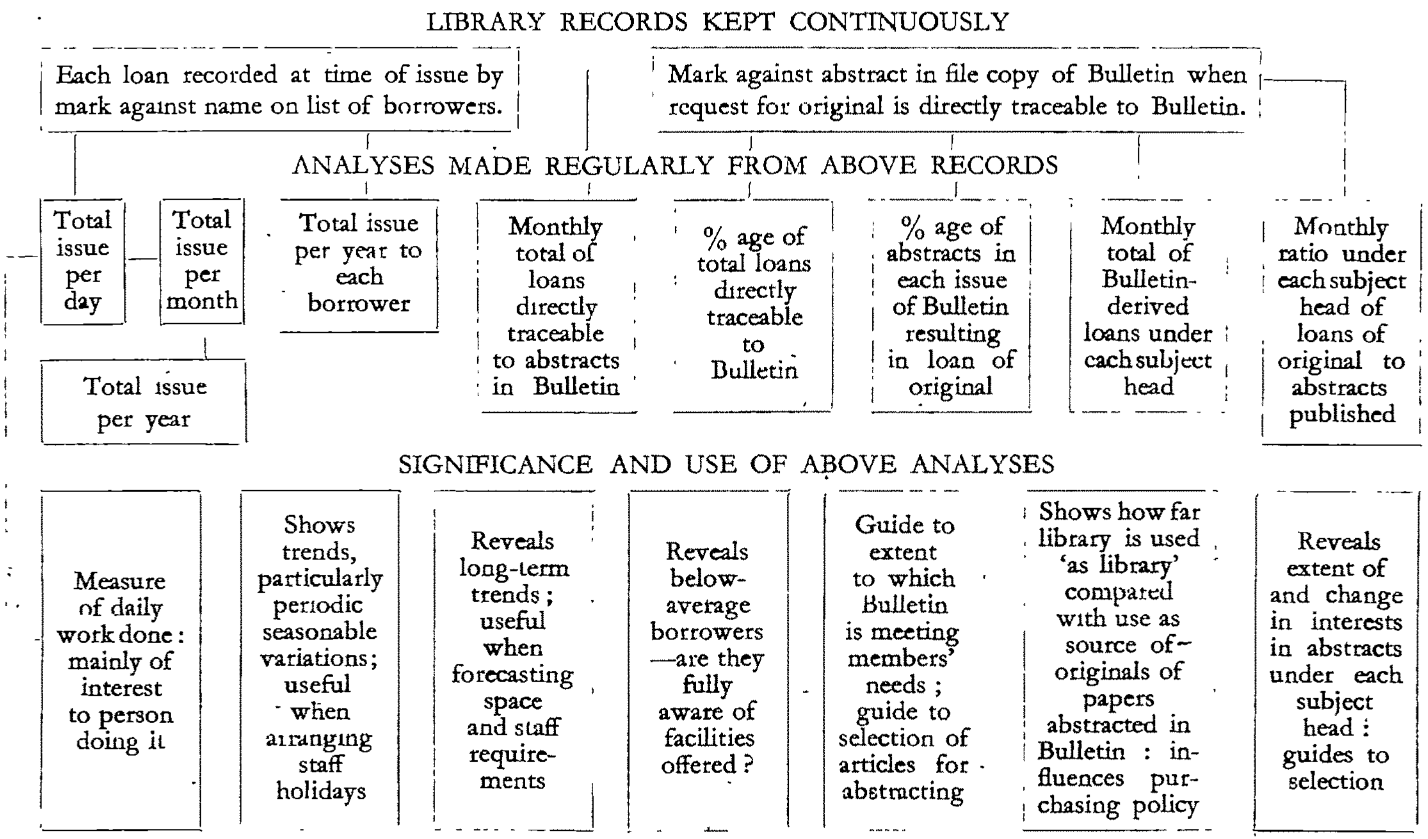
At intervals (particularly during periods of rapid expansion, and when new staff, with new ideas, is engaged) proposals may be put forward for changes in the internal organization of the library: in the method of keeping loans records, for instance. Such changes may well be desirable, but they should not be undertaken without careful consideration since the change-over usually involves a good deal of work: and a wrong decision will necessitate a change back to the old system.

Existing and easily available records will enable a rough assessment to be made of the efficiency of the present systems, e.g. number of issues per year per member of the issuing staff; but it is almost impossible to forecast a comparable figure for the new system over so long a period. A more practicable plan, therefore, is to measure accurately the time taken to make, say, 50 issues by the present system, and then, using a dummy or make-up of the proposed new system, to make another time measurement. This will reveal accurately enough whether the new system is faster or slower than the old. Other factors, such as the relative abilities of the two systems to provide the information that is required, must, of course, be taken into account when making a final decision.

Since so much of the work in a special library necessarily consists of making routine records—accession register, catalogue cards, issue records, etc.—it is well worth while to devote serious attention to devising the most efficient systems and to employ statistical and time-study methods to help one to do so.

From this very brief survey, it will be seen that while some of the statistics required, in my view, for the proper running of a special library can be collected and analysed at intervals, when the need for them arises, others should be compiled continuously. The latter are few and are mostly those which can be derived easily from records which must necessarily be kept as part of the day-to-day work of the library.

The chart appended shows the records kept regularly by my department, the significance of such records and the use made of them. It will be seen that the actual records are few and take very little time to make, but that the useful information derived from them is considerable. Many of them relate to our abstract bulletin and are not, therefore, applicable to special libraries which do not issue a bulletin; but they will, I hope, illustrate methods which may be applicable to other forms of activity.



LIBRARY RECORDS KEPT CONTINUOUSLY

Each loan recorded at time of issue by mark against name on list of borrowers.

Mark against abstract in file copy of Bulletin when request for original is directly traceable to Bulletin.

ANALYSES MADE REGULARLY FROM ABOVE RECORDS

- Total issue per day
- Total issue per month
- Total issue per year
- Total issue per year to each borrower
- Monthly total of loans directly traceable to abstracts in Bulletin
- % age of total loans directly traceable to Bulletin
- % age of abstracts in each issue of Bulletin resulting in loan of original
- Monthly total of Bulletin-derived loans under each subject head
- Monthly ratio under each subject head of loans of original to abstracts published

SIGNIFICANCE AND USE OF ABOVE ANALYSES

- Measure of daily work done: mainly of interest to person doing it
- Shows trends, particularly periodic seasonable variations; useful when arranging staff holidays
- Reveals long-term trends; useful when forecasting space and staff requirements
- Reveals below-average borrowers—are they fully aware of facilities offered?
- Guide to extent to which Bulletin is meeting members' needs; guide to selection of articles for abstracting
- Shows how far library is used 'as library' compared with use as source of originals of papers abstracted in Bulletin: influences purchasing policy
- Reveals extent of and change in interests in abstracts under each subject head: guides to selection

The two basic records each take less than five minutes per day to keep.

Information Department, British Scientific Instrument Research Association.

SCIENTIFIC INFORMATION

London meeting, 2nd November, 1949

AT this meeting Dr. Alexander King spoke first on the work of the Technical Information Services Panel of the Committee on Industrial Productivity, a body more often remembered as the 'King Committee'. His talk is reported below.

Dr. King was followed by Dr. D. C. Martin, whose paper on some of the results of the Royal Society's Scientific Information Conference in 1948 was illustrated by a number of lantern slides. The Chairman of the meeting was Dr. V. E. Parke, Intelligence Officer of I.C.I. (Fertilizer and Synthetic Products), Ltd., and Vice-Chairman of the Aslib Council.

1. THE ACTIVITIES OF THE 'KING COMMITTEE'

BY DR. ALEXANDER KING

Chairman, Technical Information Services Panel

(Reported)

DR. KING stressed that his Committee dealt with the whole question of technical information from the users' point of view. The investigation had covered information services within the Government, Government laboratories, etc., contracting firms and industry in general.

The Committee had come to the conclusion that there was no point in establishing a central Government information service. It advocated that use be made of existing resources, that the Department of Scientific and Industrial Research (D.S.I.R.) should strengthen its information services and that the D.S.I.R. Intelligence Section should be further strengthened to act as a clearing house and to direct the enquirer to the specialist source. It had also suggested that the D.S.I.R. should investigate and carry out research on information techniques.

The Committee considered that the Board of Trade Technical Information Document Unit (T.I.D.U.), which was at present responsible for disseminating reports on overseas industry—particularly war-time developments in enemy territory (German and Japanese)—should make fuller use of the research and trade associations to issue further reports of use to industries. This had at present been done to a certain extent and one of the results was the publication of reports on specialized topics; Dr. King then drew the attention of the meeting to a Ministry of Supply report on paint, which had resulted from this collaboration and was about to be published by H.M.S.O. T.I.D.U. was to be encouraged to issue further reports of this nature.

Dr. King also stated that the Committee had within its terms of reference the state of the technical press in this country, but he did not consider it politic to enlarge upon this aspect of the Committee's work at the moment.

The Committee had discussed the technical information services of the non-documentary type, similar to the Ministry of Supply Advisory Service on Plastics. He stated that Canadians have a team of visiting engineers or regional investigators under the ægis of the National Research Council. These investigators visited various industrial organizations and helped them to formulate their problems for reference to the National Research Council. A similar scheme had been recently adopted in the United States, but he did not consider that such a service would be useful in this country as there were already in existence the various research associations under the ægis of the D.S.I.R.

The Committee had considered the status of librarians in this country as well as the state of the scientific and technical libraries and had recommended that a central authority for scientific and technical libraries should be set up whose activities would be similar to those of the University Grants Committee. It had been recommended that there should be two principal scientific and technical libraries in the country. The first would be situated in London and would be for reference purposes only, and it had been suggested that this library should work in close collaboration with the libraries of the Learned Societies with their specialized collections. The other library should have a loan service based on that at present operating at the Science Library and should be situated outside London, but near a main railway line with good postal connections. Although the holdings of the libraries would necessarily be duplicated, it would mean that in the event of destruction of one of them by fire or enemy action the other would still be accessible.

Dr. King said that the Committee felt that the science collections of the British Museum Library were not sufficiently used, partly because they were not easily accessible, and the Committee felt that the possibility of amalgamating the British Museum collections with one of the newly formed libraries should be explored. It had been suggested that co-operation between the new libraries and those of the Learned Societies might be encouraged by concentrating all these institutions into one area such as the South Bank site.

In conclusion Dr. King stated that a Working Party of the Organization for European Economic Co-operation was considering library and information services and the Committee had agreed with the recommendations made by this group that there should be one centre in each of the countries concerned to be responsible for the active dissemination of technical information within that country.

2. THE WORK OF THE INFORMATION SERVICES COMMITTEE OF THE ROYAL SOCIETY

BY DR. D. C. MARTIN

Assistant Secretary of the Royal Society

I INVITE you to listen to and to look upon some words of Henry Oldenburg, a Secretary of the Royal Society, in the first edition of the *Philosophical Transactions*. They were written in 1665 in the introduction to what has strong claims to being the first truly scientific journal.

> 'Whereas there is nothing more necessary for promoting the improvement of Philosophical Matters, than the communicating to such, as apply their Studies and Endeavours that way, such things as are discovered or put in practice by others; it is therefore thought fit to employ the *Press*, as the most proper way to gratifie those, whose engagement in such Studies, and delight in the advancement of Learning and profitable Discoveries, doth entitle them to the knowledge of what this Kingdom, or other parts of the World, do, from time to time, afford, as well of the progress of the Studies, Labours, and attempts of the Curious and learned in things of this kind, as of their compleat Discoveries and performances; To the end, that such Productions being clearly and truly communicated, desires after solid and usefull knowledge may be further entertained, ingenious Endeavours and Undertakings cherished, and those, addicted to and conversant in such matters may be invited and encouraged to search, try and find out new things, impart their knowledge to one another, and contribute what they can to the Grand design of improving Natural knowledge, and perfecting all *Philosophical Arts*, and *Sciences*. All for the Glory of God, the Honour and Advantage of these Kingdoms, and the Universal Good of Mankind.'

It seems to me that these words, written nearly three hundred years ago, might well have been taken as the motto for the 1948 Conference on Scientific Information Services and certainly for the Information Services Committee in its work since. From the point of view of the working scientist it puts the emphasis in the correct places: the need for the experimental and theoretical scientist to have clearly and truly communicated information and the desirability of cherishing or recording useful knowledge.

The Committee has met nine times in full session since its first meeting on 23rd November, 1948. In addition there have been many meetings of sub-committees and *ad hoc* panels. It has received and discussed about 100 papers. It last met on 20th October, 1949. At its first meeting it took steps to maintain contact with oversea organizations represented at the Conference and this has been much appreciated. Similar committees have been set up overseas and, in particular, we welcome a corresponding committee in the U.S.A., under the chairmanship of Dr. Bronk, Foreign Secretary of the Academy of Sciences.

The basic working document of the Information Services Committee is the pamphlet containing the 94 recommendations of the Conference and I propose to follow its general pattern in sketching an outline of the Committee's work. Much will necessarily be omitted as the time allotted is so short.

Here are the main headings :—

(1) General Recommendations.
(2) Publication of Papers reporting original work.
(3) Abstracting Services.
(4) Reviews and Annual Reports.
(5) Library and Information Services.
(6) Classification and Indexing.
(7) Aids to Information Services (directories, translations, etc.)
(8) Methods of Reproduction.

Many of the recommendations concerned other bodies and these were at once conveyed to them. If the Committee feels that they have not been adequately dealt with follow-up action will be taken.

(1) GENERAL RECOMMENDATIONS

These recommendations concerned the formation of the Committee, financial support for its activities and the setting up of machinery for the interchange and co-ordination of ideas and information within the British Commonwealth. These have all been implemented.

Another general recommendation invited the Royal Society to consider the initiation of further research into the use of scientific literature. Much thought has been given to this and although no specific programme has been begun proposals for action have been made. It is hoped to implement them during the coming year. In this aspect of the Conference work, as in almost all the others, the stimulus given by the Conference itself has been considerable. Delegates and others have taken note of the recommendations, initiated appropriate action in their own organizations and so carried out the wishes of the Conference. There has been clear evidence of this from several quarters and, in particular, in this section dealing with research into the uses of scientific literature the Committee has noted with satisfaction surveys now being conducted in the U.S.A., e.g. by the American Institute of Physics into the use of Science Abstracts by physicists in the U.S.A.

(2) PUBLICATION OF PAPERS REPORTING ORIGINAL WORK

The Conference concluded that many defects of original scientific papers and delays in publication are due to inadequate preparation of the manuscripts submitted to publishing bodies and it made a number of recommendations urging that vigorous action should be taken to improve the preparation of papers. The Committee attaches considerable importance to this but decided that before any steps were taken careful consideration should be given to the best method of achieving the desired improvement of this primary unit of scientific information services. A sub-committee under the chairmanship of Professor G. L. Brown, C.B.E., F.R.S., was therefore appointed at the Committee's first meeting in November, 1948. The sub-committee collected from some fifty scientific publishing organizations their instructions to authors, and after a study of this material and further discussion the sub-committee has drafted a concise pamphlet of general applicability, i.e. it is not designed to replace the instructions issued by the societies but to provide *general* advice useful in the writing of any original scientific paper. The draft is being submitted to various authorities for informal comment and advice, and the Information Services Committee proposes to invite the Council of the Royal Society to authorize its publication and issue to universities, Government and industrial research establishments in the hope that authors, particularly younger scientists, may derive benefit from it with consequent improvement to scientific literature.

A recommendation that funds should be made available to provide facilities for the work of editors and publication boards was sent to scientific societies for comment and it was evident from the replies that where staff and office facilities have been acquired the beneficial effect on the journals has been very marked. Smaller societies are unable to maintain such facilities. The replies also produced considerable evidence of grateful appreciation for the valuable help already provided to many scientific societies by the Parliamentary Grant-in-Aid for Scientific Publications administered by the Royal Society. In the past this Grant-in-Aid appears to have been devoted largely to meeting printing costs. Whilst the importance of extending help in this direction is also most desirable the Committee, after careful consideration of the views contained in the replies, strongly recommended to the Council of the Royal Society that efforts should be made to seek an increase in the Grant and to include in its scope financial assistance which would enable editors to obtain additional staff and facilities.

The availability of copies of scientific papers for private study by the individual scientist was recognized by the Conference as an important factor in research and the Committee at its first meeting invited Dr. T. E. Allibone, F.R.S., to study, in consultation with others, with special knowledge and competence, what steps might be taken within the terms of the existing copyright law to enable scientists to obtain single copies of scientific papers from libraries and similar institutions by photocopying methods. The study revealed that because of the law of copyright, many libraries would refuse to supply photo-copies of papers not otherwise available until the applicant supplied evidence that the publisher and, in some cases also, the author had no objection. Although the Copyright Act contains a special fair dealing clause which allows copying for the purpose of private study under certain conditions its general terms, which are, of course, designed to safeguard property rights, prescribe that no copying of any work can be done without the permission of the proprietor of such work. Without amendment of the

Act, therefore, no general legal authority to make copies of scientific papers is possible. Another complication is that in some scientific journals the copyright remains with the authors, whereas in others it resides with the publishing organization. It was evident that no legal arrangement of general applicability could be introduced without considerable delay and the initial suggestion that some form of agreement, which permitted copying, between libraries or other similar organizations on the one hand and publishers on the other had to be abandoned. Nevertheless, bearing in mind that scientists are normally anxious to have their papers widely used, it was considered that if the leading organizations publishing scientific papers publicly declared that they would not object to copying from their publications for the purpose of private study, then much of the troublesome prior consultation would be removed, thereby facilitating the work of the research worker.

A very carefully worded declaration was framed and in April, 1949, the Information Services Committee invited the Council of the Royal Society to subscribe to the Fair Copying Declaration, for an experimental period of two years, and thereafter to invite other publishing bodies to do likewise. This was done; the declaration was favourably received and to date about 100 publishing organizations, including most of the leading scientific societies, have signed the declaration. An explanatory note was issued with the declaration and *Nature* published a statement about it on 13th August, 1949 (*Nature*, 164, page 289). Similar action in Canada is being contemplated. As a practical measure it is hoped that this step may bring considerable benefits. The declaration has been copied and given a world-wide circulation by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

It must be emphasized that in no way whatever is the declaration intended to harm publishers, many of whom are scientific societies, and but for whom this whole subject of disseminating information would be in a serious predicament. Let us clearly and freely express our debt to them for their great services in the past and to those who have again shown their broad-minded and willing co-operation by signing the declaration. At the same time let the scientist and his librarian associates play their part by scrupulously observing the conditions laid down in the declaration:

'(1) The recipient of the copy is given notice that he is liable for infringement of copyright by misuse of the copy, and that it is illegal to use the copy for any further reproduction.

'(2) The organization making and furnishing the copy does so without profit to itself.

'(3) Proper acknowledgment is given to the publication from which the copy is made.

'(4) Not more than one copy of any one excerpt shall be furnished to any one person'.

I hope that two years hence, when the experiment ends, we shall be sufficiently encouraged to go forward with the publishers to some permanent arrangement. You, as members of Aslib, can do much to make the experiment a success, and I hope you will do so.

(3) Abstracting Services

One of the most clearly evident advantages of the Conference was the initiation of a greater degree of collaboration between various British abstracting organizations and the Information Services Committee took immediate steps to implement the recommendation that a standing committee on abstracting be set up to foster such collaboration by inviting Dr. G. M. Findlay to bring together those concerned. As a result the Abstracting Services Committee, with Dr. Findlay as Chairman, was formed, and during the year it has held five meetings. These have taken place at the Royal Society and Mr. C. J. Burleigh has acted as its interim secretary.

It was asked to advise on the implementation of all the recommendations on abstracting services and already it has several important achievements to its credit. There is no doubt that it should continue its valuable work.

Among its principal activities may be mentioned the following :—

(*a*) *Synopses accompanying scientific papers*

Although it is not unanimously accepted that authors' summaries can be used for abstracting purposes it was considered that some improvement in the preparation of such summaries or synopses would be beneficial to abstracting agencies. The Abstracting Services Committee acting through the Information Services Committee invited the Council of the Royal Society to endorse the following recommendations :—

(*i*) To recommend that every paper appearing in a scientific journal should be accompanied by a synopsis or précis which should be independent of the text and figures and should preferably appear at the beginning of the paper ; and

(*ii*) The synopsis should be subject to the same editorial scrutiny and correction as is usual for the full paper. Automatic acceptance of a synopsis written by an author is undesirable.

The Council in approving these recommendations also approved a leaflet entitled *Guide for the Preparation of Synopses*, prepared by the Abstracting Services Committee, and it instructed that both be sent to scientific societies and other publishers of scientific journals with the invitation to implement the recommendations. There has been a wholly sympathetic response and extensive demands for copies of the leaflet from overseas as well as in the United Kingdom is encouraging evidence of the measure of acceptance of this action of the Abstracting Services Committee. Unesco has copied the recommendations and the leaflet, thereby giving them universal notice.

(*b*) *List of Periodicals and Bulletins containing abstracts published in Great Britain.*

The Abstracting Services Committee also supervised the compilation of a comprehensive list of journals, etc., containing abstracts. There are 127 entries in respect of Great Britain, each of which indicates the subjects covered, approximate number of abstracts per annum, its published price, the name and address of the issuing authority, as well as details as to frequency of issue of parts and of indexes to them. An appendix to the list gives similar information about journals issued in other countries of the Commonwealth. This document, issued in June, 1949, at 2*s.* 6*d.* per copy, is of considerable value in providing a survey of British activities in abstracting services. There has been considerable demand for it and it will be used in planning the future activities of the Committee.

(*c*) *Unesco Conference on Scientific Abstracting—June,* 1949

The Abstracting Services Committee proved to be an invaluable forum for the discussion of the documents issued by Unesco for this Conference, inasmuch as the British point of view could be formulated in the Committee. The Information Services Committee, which had been invited to prepare the brief for the British delegation consisting of Dr. C. H. Desch, F.R.S., Dr. L. H. Lampitt and Mr. H. T. Pledge, acknowledges with gratitude the great help received from the Abstracting Services Committee in this respect. At the Unesco Conference it was found that the decisions of the Royal Society Scientific Information Conference and the consequent activities had been followed with considerable interest in other parts of the world. The British delegation urged that the model of the Abstracting Services Committee should be followed elsewhere and this suggestion was adopted by the Conference. Among the more important recommendations of the Unesco Conference were the setting up of :—

(*i*) regional committees dealing with abstracting for all scientists in a definite geographical area ;

(*ii*) subject committees, with international membership dealing with abstracting of a particular field of science for the world as a whole ;

(*iii*) a channel of liaison or clearing house between these committees to be provided by Unesco, for which purpose an advisory committee would be formed. This advisory committee has now been set up and contains four British nationals as members.

Many members of both the Information Services Committee and the Abstracting Services Committee were present and it is generally accepted that the lead given by the British was due in large measure to the activity of these two bodies during the months prior to the Unesco Conference.

(4) REVIEWS AND ANNUAL REPORTS

In this section it appears that societies are carrying out the wishes of the Conference.

(5) LIBRARY AND INFORMATION SERVICES

As Dr. King has told you, the more important aspects of this section have received very thorough discussion by his Panel, and although these were recommendations which were not strictly relevant to Dr. King's review, these were left over until the Panel had reported. The Library Association has also given careful study to certain of these recommendations and has just communicated its findings to the Information Services Committee. This report from the Library Association will be considered at the next meeting of the Committee.

(6) CLASSIFICATION AND INDEXING

The Conference came to no clear-cut conclusions about classification and invited further study of this difficult subject by a standing committee. The Committee has, therefore, formed a sub-committee under the chairmanship of Professor J. D. Bernal, F.R.S., and considerable thought has been given to the subject. The sub-committee has made some headway in clarifying the problem. It is taking steps to make closer investigations of existing methods and to seek information and comments about any systems under consideration by the international scientific unions.

Another recommendation concerning data tables invited the Royal Society to keep in view the availability and up-to-dateness of scientific compendia and data tables. Each of the National Committees has been asked to prepare lists and to submit comments and several such lists have been received. The list for chemistry was published in *Chemistry and Industry* (10th September, 1949, No. 37, pages 639–40).

The recommendation that the Publishers' Association be invited to arrange the issue of suitable unit catalogue cards for all British scientific and technical books is considered to have been satisfied by the scheme to be introduced by the British National Bibliography. The request that the British Standards Institution be asked to issue guide cards bearing U.D.C. numbers has been fully considered by that body and has received the detailed attention of Dr. J. E. Holmstrom, a member of the Committee. The British Standards Institution is unable to proceed with the suggestion meanwhile. A paper on this subject by Dr. Holmstrom appeared in the *Journal of Documentation* (Vol. 4, No. 3, December, 1948, 175/187).

(7) AIDS TO INFORMATION SERVICES

The Committee is unable to act directly on the majority of the recommendations in this section, but the earliest opportunity was taken to forward them to the authorities concerned. Thus Aslib was invited to comment on the suggestion that a grant be made to enable the completion of a revised edition of the Aslib directory to sources of specialized information, the Federation of British Industry was invited to prepare a directory of industrial research and suggestions concerning the *World List* were forwarded to the office of this organization. There is little further to report on these.

The Department of Scientific and Industrial Research was invited to issue a directory of centres of highly specialized research and whilst this has not yet been issued, discussions with the British Council and other bodies have taken place with a view to its issue. The Department of Scientific and Industrial Research is also going to publish a directory of its own research activities.

In regard to the recommendations concerning translation services, Aslib has been invited to give greatly increased publicity to its Register of Specialist Translators. Dr. J. E. Holmstrom has conducted negotiations, on behalf of the Committee, with examining and other bodies concerned with translating and interpreting with a view to establishing recognized qualifications for translators of scientific material, and the matter is still under discussion. The British Commonwealth Scientific Official Conference Standing Committee has given consideration to the creation and maintenance of a central location index of translations and its recommendation to effect this is likely to be put into operation in the near future.

Dr. J. E. Holmstrom has made an exhaustive study of the need for improved special dictionaries and the fixing of interlingual equivalents for scientific terms. The results of this study were embodied in a report issued by Unesco (*Interlingual Scientific and Technical Dictionaries*—Unesco, NS/SL/1, 20 July, 1949, 54 pp. and bibliography and other appendices).

The Committee has noted with satisfaction recent action taken by the Department of Scientific and Industrial Research to issue each month translated titles of the contents lists of Russian scientific journals. Associated with this service the Science Library is now prepared to make available by photo-copy any deposited translations of Russian scientific papers.

(8) METHODS OF REPRODUCTION

The Committee has taken steps to pass forward requests and information to the authorities named in the recommendations, thus the British National Committee on Documentation was invited to appoint an advisory committee on documentary reproduction. The Information Services Committee has also encouraged experiments in producing mathematical papers without the intervention of letterpress.

The Committee, being aware of improvements which had resulted in a reduction in the delays of original scientific papers, decided to delay action on the recommendation that permanent relations be set up with representative printing organizations until such time as the effect of the improvements could be assessed. A notice in *Nature* inviting comments on any printing difficulties being experienced evinced no reply. The situation is, however, capable of considerable improvement, and the

Committee has recommended the formation of a small consultative committee with representatives from the British Federation of Master Printers and the Printing and Kindred Trades Federation.

The Committee believing that information about various photographic methods of documentary reproduction should be more widely known encouraged the publication of an article on the subject. This article, written by Mr. B. de Gorter, will appear in *Research* next year.

In view of the great importance of easy reproduction methods the Committee recommended that the Department of Scientific and Industrial Research should initiate and encourage research on methods of photocopying not requiring the use of silver salts and especially of methods making it possible to produce reductions and enlargements.

(9) CONCLUSION

During the year action has been initiated on every recommendation. Some actions such as those concerned with the fair copying declaration, abstracting and national library services have been the result of prolonged and detailed study by groups. Others have been likewise studied by individual members of the Committee and most of the remainder have been dealt with either by consultative correspondence with scientific societies or by immediate reference to other authorities.

There remains, nevertheless, much still to do and the Committee continues its work.

BIBLIOGRAPHICAL SURVEY

London meeting, 2nd December, 1949

(*Reported*)

THE meeting was held in order to give Aslib members an opportunity for the discussion of the interim reports circulated by the Unesco/Library of Congress Bibliographical Planning Group in preparation for the international meetings on documentation which were expected to take place in the United States in the autumn of 1950.

As Chairman of the meeting, Miss E. M. R. Ditmas, Director of Aslib, introduced the subject by summarizing the events which had led to the compilation of the reports.

The Library of Congress, through its experience during the war years, had realized the importance of bibliography as the tool of scholarship and had planned to establish a pilot project in bibliographical planning for the purpose of analysing some of the problems arising. A petition to Congress in 1946 for special funds for this purpose for the fiscal year 1947 was not granted and work on the subject had to be carried out by the library staff when time could be spared from their other duties. The interest of the Library of Congress in this matter was, however, recognized by Unesco which, at the second session of its General Conference, held in Mexico in November and December, 1947, instructed the Director-General, 'As a basis for the co-ordination of bibliographic activities, to carry on a survey of bibliographic services jointly with the Library of Congress of the United States and to seek the active co-operation of other national libraries in the development of the survey'. (Programme, Resolution No. 2.3.1.2.1.1.)

The pooling of funds from Unesco, made available through this decision, with the resources of the Library of Congress, permitted a start to be made on the projected survey. During 1948 progress was slow and exploratory, though a preliminary case study of bibliographical resources for fundamental education was published.[1] The project received a further endorsement at the Third Session of the General Conference of Unesco, held at Beirut in November, 1948 (Resolution No. 6.512). This continued support led to the creation, early in 1949, of the Unesco/Library of Congress Planning Group, under the leadership of Dr. Luther Evans and with Mrs. Kathrine Murra as executive secretary.

In 1949 the work of the Planning Group was mainly concerned with the preparation of a working paper to be available for discussion at an international conference to be convened late in 1950. It was hoped that this conference might fit in with the proposal that the Third International Congress on Librarianship and Bibliography, organized by the International Federation of Library Associations, should be held in the

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[1] Murra, Kathrine Oliver, *Sources of information for fundamental education with special reference to education for literacy.* Washington, D.C., Library of Congress, 1948, pp. 123.

U.S.A. in the autumn of 1950, a suggestion which was supported by the International Federation for Documentation. In order that the discussion at the conference should be as informed as possible, two interim reports had been prepared by Mrs. Kathrine Murra and had been circulated as Appendices to the Library of Congress *Information Bulletin* for July 5–11 and September 13–19 respectively.[2] It was the second of these reports which was before the meeting for discussion, so that the opinions expressed by Aslib members might be summarized for forwarding to the U.K. National Commission for Unesco which, in turn, would send them, together with similar reports from other British library organizations, to the Unesco/Library of Congress Planning Group for guidance in the compilation of the working paper itself.

Copies of the second interim report had been circulated beforehand to all those intimating their desire to take part in the discussion, which was opened by Mr. G. Woledge, Librarian of the British Library of Political and Economic Science. Mr. Woledge stated that he felt that, though the report contained much valuable raw material, the phraseology and the manner of its presentation rendered it somewhat obscure. In particular he objected to the use of the term 'bibliographic control' and in this he was supported by all subsequent speakers. It was also generally agreed that, in its present form, the report would not be a desirable basis for the working paper. Mr. Woledge then discussed a number of points in detail.

When the discussion was thrown open to the meeting the following were amongst those whose opinions were afterwards summarized as Appendix I in this number: Miss Barbara Kyle, Royal Institute of International Affairs; Dr. D. J. Urquhart, Department of Scientific and Industrial Research; Mr. Theodore Besterman; Mr. H. G. A. Hughes, School of Oriental and African Studies; Mrs. P. Sen, Manchester Oil Refinery, Ltd.; Mr. A. H. Chaplin, British Museum; Mr. C. Le Maistre, Chairman of Aslib Council and President of the International Federation for Documentation; and Dr. J. E. Holmstrom, Imperial Chemical Industries, Ltd.

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[2] Murra, Kathrine Oliver, *First interim report of the Library of Congress Bibliographical Planning Group*, Washington, D.C., June, 1949, pp. 16.

Murra, Kathrine Oliver, *Second interim report of the Unesco/Library of Congress Bibliographical Planning Group*, Washington, D.C., Library of Congress, September, 1949, pp 57.

FORMS OF QUESTIONNAIRES: THE EFFECT OF DRAFTING ON THE RESULTS OBTAINED

London meeting, 6th January, 1950

THE first of the contributions to this meeting was made by Mr. Robert J. E. Silvey, of the B.B.C. Listener Research, and unfortunately it is only available in note form, which does scant justice to a brilliant talk. The report may, however, serve to indicate some of the main points made by him.

Mr. Silvey was followed by Mr. D. L. Lamberth, of Social Survey, Central Office of Information, whose paper is printed on page 131. The Chairman for the meeting was Mr. J. F. Stanley, of the British Standards Institution.

1. THE DRAFTING OF QUESTIONNAIRES

By Robert J. E. Silvey
B.B.C. Listener Research

(Reported)

MR. SILVEY quoted the widespread assumption that the drafting of questionnaires was only a matter of common sense—was this really the case?

Since Aslib members would be most concerned with the practical aspects of the subject he would pay most attention to these.

The first important point was to decide what sample of the population was to be approached: was the selection to be by a random sample—a method which would need care: the standards of comparison need to be watched. There is also the problem of no replies—the reasons for lack of response should be sought since these may be important.

When drafting a questionnaire it should be remembered that 'You cannot get out of an enquiry more than you put into it'. Any person who sets out to draft a questionnaire should ask himself the following:—

(1) What do I want to know?
(2) What facts would I like to get from the respondent if I could?
(3) What facts can I, in fact, reasonably expect from the respondent? (Dependent primarily on information at his disposal but also on the way in which the questions are asked.)

Wherever possible a pilot survey should always be carried out to test the questionnaire before it is widely circulated.

Ask for facts wherever possible, e.g. 'Do you read?' rather than 'Do you like reading?'

Make your questions as concrete as possible, e.g. 'Were you reading—yesterday ?' rather than, 'How often do you read—— ?'

Avoid ambiguity.

Since no one is emotionless, it is important to evoke a passion for truth. This is likely to come if the respondent's interest in the object of the questionnaire can be aroused or at least his sympathy. Interest can also be evoked by clear statements and manifest care in the drafting of the questionnaire.

Wrong emotions should be guarded against. Pride may influence replies and should be allowed for—anonymity may avoid this in some instances. Prejudice may be aroused by use of terms which have become emotive symbols. Boredom may be induced by too many questions, questions which deal with subjects remote in interest, or questions which are vague in phrasing.

There is also the problem of suggestibility. People look for an easy way out and people like to answer 'yes'. The informant should therefore not be able, by reading your expression, to discover what the enquirer thinks or where the truth lies.

2. THE LIMITATIONS OF QUESTIONNAIRES

By D. L. Lamberth

Social Survey, Central Office of Information

BEFORE really getting under way may I clearly define two terms which will occur in this talk: *recording schedule* and *questionnaire*. By a schedule I mean a piece of paper containing questions, instructions, etc., which is carried about by an *interviewer* and on which the replies to the questions are filled in by the interviewer.

By a questionnaire I mean a piece of paper containing questions which is *sent to* an informant and which is *filled in by the informant and returned to* the questioner by the informant.

Please don't go away to-night with the impression that I think all questionnaires are useless bits of paper. Used properly a questionnaire can be a powerful research tool, but, of course, it has its limitations, and since I shall be talking to-night primarily about these limitations, my picture will be somewhat biased.

Now a word or two about the ideal interview situation. This is, of course, a direct interview between questioner and informant, where, by the rephrasing of questions, the addition of subsidiary questions, the explanation of terms, the observation of the manner of delivery of replies and so on, and by general conversation the questioner can make his questions perfectly clear and he can be quite sure that he understands the full import of the replies.

If, by the necessity of making many interviews in a short time, you are unable to carry out each interview personally, you can use one of two main methods.

The one method is to use an interviewer as deputy for yourself, to stand as your proxy in the interview situations and ask, for you, the questions you would ask yourself. In this method it is customary to arm the interviewer with a recording schedule which contains the questions you want asked, which allows space for the replies and contains instructions on the manner of presentation of the questions.

The other method is to print on a sheet of paper the questions you want answered and to send this questionnaire to the informants, asking them to fill in their replies and return the questionnaire to you.

A schedule may contain a large number of questions, under special circumstances, perhaps a hundred or more. Interviewers, when working a well-chosen sample, spend more time in finding their informant than on actually carrying out the interview, so it is economical when you have found your informant to ask as many questions as possible within the limits of the informant's patience and interest. It is quite reasonable to expect an interview to take as long as an hour provided that the subject matter is interesting and the interviewer competent.

Both factual and opinion answers can be obtained, and by suitably ordering the questions and by using questions which cross-check, true attitudes of informants can be extracted.

The schedule is not the primary contact in the interview situation, it is merely an adjunct to the interviewer to serve as a reminder of the questions that are to be asked, the order in which they are to be asked and to provide a record of the replies.

The main limitations of the use of interviewers, apart from expense, are, of course, lack of uniformity in interviewing ability, and interviewer bias caused by faulty recording and prompting of answers.

May I say here with due respect if you ever need to use this method you would be well advised to put the job out to a reputable agency, which has its interviewing staff, Coders, Machine Operators and Computers to hand, and which can do the job far more cheaply and efficiently than any temporary organization you can set up.

The types of questions which are commonly used on questionnaires and schedules can be split into three kinds. Open-ended discrete questions, pre-coded discrete questions, and batteries of questions.

Open questions are those which ask for the reply to be in the informant's own words and answered at his own chosen length, no possible answers are suggested. The informant can answer in as much or as little detail as he pleases or thinks is required and this may be a possible source of error. One informant, whilst not necessarily being more informed or authoritative than another may, by giving a long answer, have more weight given to his opinions in the final analysis. For example, if in answer to a question a well-informed person makes one well-considered point in reply and another in a rather superficial manner, mentions three points which just come to his mind, the second person will have his opinion recorded for each of three points the first will have his opinion recorded for one only.

Also in an open question, unless it is worded with scrupulous care, there is a large probability that an answer will be irrelevant.

Precoded questions are those in which the answers are supplied and the informant is asked to tick the one (or several) which most closely approximates to his ideas. To some extent the precoded answers define the question and there is less likelihood of the answers being irrelevant. But, if the codes are too narrow, an informant will not know which of several he should tick or if they are insufficient he may not find given the answer he wishes to record.

If it is permissible to give several answers to a precoded question then the same criticism applies as to open questions. The voluble but not necessarily better-informed person is more heavily represented in the final analyses than the person who gives one well-considered answer.

Batteries of questions are those which are linked closely by dealing with one item and the battery may be repeated for as many items as are under consideration.

For example, supposing you are asking about the borrowing of books from XYZ library. Your battery may be: Have you had any books from XYZ library in the last four weeks?

Record for each book:—

(*a*) The title.
(*b*) The author.
(*c*) Date borrowed.
(*d*) Date returned.
(*e*) Did you read it thoroughly, partly, or not at all?
(*f*) Was it borrowed on your ticket or some other person's ticket?
(*g*) Did you borrow it yourself or did somebody else get it for you?

Such batteries of questions are an extremely useful method of economizing on space, since the one set of questions can be used to cover a large number of items. The answers, however, cannot be recorded under the questions, but have to be recorded in a separate panel and a battery of, say, seven questions to cover perhaps ten items with its necessary recording panel presents at first sight a fearsome aspect and as far as questionnaires go it is the first sight that is important. Remember also that a battery of seven questions for ten items is, in fact, seventy separate questions. That is asking a lot of any informant. . . .

Questions may also be split according to whether they are dealing with facts or opinions and attitudes. In general, factual questions are either answered truthfully or not at all, but the answer to an opinion question on its own is not very likely to represent correctly the opinion of the informant. Only by the summation of the results of a number of opinion or attitude questions, and by using questions which cross-check, can an adequate estimate of the informant's attitude be obtained. Moreover, in opinion answers which are comparative, say, Very Good, Good, Average, Bad, Very Bad, you have no reason to believe that all informants that say average, for example, mean the same thing. Very good from one may mean precisely the same as good or even average from another.

Now I would like to say a word or two about the meticulous care that is required in framing questions.

Take this one, how many books did you read last month?

How many is all right, that's generally understood, but what do you mean by *books*? Library books? Books from one particular library? Are magazines included? *Did you read*? What does that mean, skip through? Glance at? Read thoroughly? Take home, not read and bring back? Who's *you* anyway? You to whom the questionnaire is addressed? Your family? And what's *last month*? The last four weeks from to-day? From last Sunday or Saturday? Do you mean December?

Well, we might have said, 'Will you please tell me how many books (from XYZ library) you have taken out yourself in the last four weeks from yesterday?' The question is now, I think, unambiguous, but it still will not necessarily get a true answer. A month is a long period for memory span. It would be better to ask separately about last week, the week before, the week before that, and so on. You can then compare the data for last week, the week before, etc., and discover whether, in fact, informants could remember borrowing books as long ago as four weeks. Better still, if you want exact data, ask for the date of borrowing; you can then make checks, if necessary, on a proportion of your sample at the library. But whenever you make the questionnaire more complicated, as you must for more accuracy, you will get a lower proportion returned.

One other point must always be borne in mind. The answers 'don't know' or 'doubtful' are often good and valid answers. It is quite wrong to force an informant who is really doubtful or ignorant to decide between other codes. It is better to have a genuine 'don't know' or 'doubtful' than a dubious other answer. But, many informants (and interviewers for that matter) think that in some measure they have failed or are reprehensibly ignorant in giving such an answer and you must make it clear that 'don't know' is an acceptable answer. It is not always sufficient simply to put 'don't know' as the last code of the precode list—it still looks like an afterthought, put the words in your question, e.g. 'Can you renew books from your library by telephone or don't you know?' and make the precode answers quite clear, say not just Yes, No and Don't know, but *Yes, can renew by phone; No, cannot renew by phone* and *Don't know.*

Now to discuss the second method, one which you can carry out yourself, in rather more detail.

I would like first to consider the limitations imposed by using a questionnaire and then to examine the difficulties caused by these limitations.

As we said earlier the ideal situation between a questioner and informant is a direct conversation in which the questioner can, by example or rephrasing of his question, make it quite clear what information he is seeking and the informant can make his answer quite relevant and unambiguous. Moreover, in a direct interview, there are social forces which act on the informant to make him play his part in answering the questions.

When using a questionnaire all personal contact is lost, the questionnaire is, in fact, the one and only link between the questioner and informant.

Now what things are missing on the piece of paper, the questionnaire? Let us list some of them:—

Adjustment for literacy of informant.
Inflexion of the voice.
A chance of making an explanation of what is meant.
Chance to rephrase a question.
Order to the questions.
Check on the truth of an answer from the way in which it is given.
And lastly, you are no longer sure *who* is answering your questions.
Let's look at these in more detail.

No *inflexion.* Words on a questionnaire can be rather crudely stressed by underlining or the use of block capitals, but these methods tend to make a questionnaire look rather untidy and blotchy and too much use destroys the object. When more than half the words are underlined it's the words not underlined that carry the stress.

No explanation of meaning.

No rephrasing of questions.

Quite obviously the words you chose to put on your questionnaire must, if they are to serve any useful purpose at all, convey the same precise meaning to all your informants as to yourself.

I would stress *yourself*. If you are carrying out a survey on your pet subject you can easily fall into error by using jargon or technical phrases which may have a very precise meaning for you but a much looser or even different meaning for most other people.

No order to the questions. In a conversation the order of the questions is obviously dictated by the temporal order in which they are given, but when you have written them on paper there's nothing to stop the informant answering in the reverse order and nothing to prevent him seeing the general line of thought you are following. Therefore, there is no element of surprise, no possibility of forcing an informant to answer an awkward question truthfully, because you have by earlier questions forced him to the point of either being truthful or, apparent to himself, illogical.

No check on the truth of an answer by the way in which it is answered or by asking *subsidiary questions.*

This point and the fact that there is virtually no order to the questions means that you *cannot*, with any certainty, take any opinion expressed in a questionnaire as the true opinion of the informant. This remark does not apply with quite the same force to facts. Most informants will either give the true facts or refuse to reply, and for facts you can include in the questionnaire, if necessary, subsidiary questions which will test the truth of the answer. Even the opinions honestly expressed by a willing informant will most likely be opinions about his present intentions rather than his future actions. For example, if you ask—'Have you a car ?', you can be comparatively certain that the answer 'Yes' does, in fact, mean 'Yes', and the answer 'No' does mean 'No'. But if you ask those who say 'No', 'Are you going to get a car within the next year or two ?' probably most of those saying 'Yes' will be meaning 'I hope so' or 'I would like to' and not 'Yes, I certainly will get a car in the next year or two'.

There is a word of warning here to be said about factual questions. They must be worded so that they do elicit factual answers and not answers which are tinged with opinion or are given as socially acceptable answers. For example, if you say 'Do you go to church on Sundays ?' far more people will say 'Yes' than, in fact, do go to church regularly. Even if you ask 'When did you last go to church ?' informants quite unconsciously may greatly underestimate the length of the period since they last attended church. The only safe way to tackle this sort of question is to say, 'Did you go to church last Sunday ?' 'Did you go the Sunday before ?' 'And the Sunday before that ?' 'And the Sunday before that ?' 'Is there any reason why you have been unable to go in the last four weeks?' You have asked for facts, you have given the informant a chance to find an excuse for not doing what he thinks is the thing he ought to have done. Having got the facts, of course, you can ignore the excuses or use the type of excuse offered as an assessment of the informant.

You are no longer sure who is answering your question

Your questionnaire was presumably addressed to a specific person. The chances are that the rest of his or her family will help in answering it or that the husband will answer for the wife, or vice versa. This is another reason against asking opinion questions. Whereas there can be no doubt about facts people's expressed opinions vary tremendously according to the situation. A man might say to his pal in the pub, 'I wish I could get away from my family for a week or two', but he's not likely to write this on a questionnaire with his wife looking over his shoulder.

One further great limitation caused by using a questionnaire in place of a direct interview is that the informant must make a personal effort in filling in and returning the questionnaire, without having the questioner on the spot to encourage him.

Obviously, then, everything that can be done to make it easy for the informant to do his job must be done. The questionnaire must be short and must not only be simple to fill in, it must look simple at a first glance otherwise it will soon be mislaid, burnt or thrown in the waste-paper basket. First of all put on the schedule, or better still, in a covering letter, the reason for the enquiry, the importance of the informant's answering, thank him in advance and enclosed a stamped-addressed envelope. The informant knows two real stamps cost you 5*d.*; he thinks franked envelopes cost you nothing.

Lay out your questionnaire so that the questions stand out clearly from the precoded answers or the answer spaces, put the questions neatly in columns and say quite clearly how the answer is to be indicated. If you want a tick in a box say so, and say 'please put a tick in the appropriate box'. If you want a number ringed, say 'please ring the appropriate number', and phrase all your questions courteously. Start with 'I would like you to tell me . . .' or 'please will you say . . .', but don't overdo it. If any instructions are required put them with the relevant questions on the questionnaire. It takes up space but nothing is more irritating (remember your Income Tax forms) than to be told see note so and so. Unfortunately, you can't put I.T. forms on the fire with impunity, but your questionnaire can go there.

Then get your questionnaire on one sheet of paper, preferably one side of a sheet of paper and don't cramp things up. This means quite clearly that you can't ask for much on one questionnaire and this fact you must accept.

If it is essential that you require more information than you can reasonably get on to one sheet of paper first consider whether you cannot achieve your aim by splitting the questions into two groups, addressing one lot to one half of your informants, and the other half to the second half of your informants with, of course, some overlapping classification questions, so that you can link together the replies from the same kinds of people.

If this cannot be done in any way, then before going any further you should consider carefully whether, in fact, questionnaire methods are the right methods to use and only when you are convinced go on to making a two- or three-page questionnaire, bearing in mind that as the questionnaire gets longer so will your proportions of returns fall.

Whenever questionnaire methods are employed it is imperative that some follow-up system is used. The first step is to send a reminder, not forgetting to enclose a second questionnaire and a second stamped-addressed envelope in case the first ones have been destroyed. A second, and even third reminder, can be sent, but even so, there will still be some non-respondents. These, or at least a fair proportion of them, should be interviewed and their answers to the questionnaire obtained, together with some classificatory data, so that you know which types of people are not represented in your sample. Suitable weighting up of these replies will then enable you to complete your full quota.

A Final Word

When you have got your draft questionnaire, and have criticized it thoroughly to yourself, word by word, try it out on colleagues, friends and acquaintances. The more carping and critical they are the better. Ask them to pick all the holes in it they can. Remember one slip or ambiguity on your final draft is repeated on every questionnaire you receive back, and may completely invalidate the question in which it occurs.

Then pilot your questionnaire. That is, send it out to a small sample and see what has happened to the returned questionnaires from these people. Also interview directly at least a proportion of the pilot informants, asking not only which questions were difficult to understand or difficult to answer, but asking your original questions again and comparing the answers obtained by interview with those obtained by the questionnaire. If they match up—well and good ; if they don't—there's clearly some more work to be done before you can consider your questionnaire ready for its job. Above all make sure that the conditions are the same for the pilot run as you intend for the main sample, e.g. if you intend to send reminders at weekly intervals on the main sample, then you must send your reminders at weekly intervals on the pilot.

NATIONAL BIBLIOGRAPHIES

London meeting, 8th March, 1950

AT this meeting, which was the last of the series for the 1949–50 session in London, Mr. F. C. Francis, of the British Museum, spoke first of the *British National Bibliography*, a venture which had been launched on 1st January, 1950. He was followed by Mr. T. C. D. Evans, of His Majesty's Stationery Office, whose contribution on the H.M.S.O. publications index is given in summary. The Chairman was Mr. L. J. F. Brimble, one of the Editors of *Nature.*

1. THE BRITISH NATIONAL BIBLIOGRAPHY

By F. C. Francis

British Museum

I GREATLY appreciate the privilege of being able to talk this evening to Aslib on the subject of the British National Bibliography—an enterprise in which we are extremely glad to be able to count on the support of Aslib, and in the formation of which Aslib, in the person of Miss Ditmas, played a prominent part. It is, of course, early days to be speaking of this venture: it is a bare nine weeks old this very day, having been safely delivered, a rather slender child, on 4th January. It has put on weight since then, and we hope it can be safely described as a lusty infant. But it is still really growing up and its character is still being formed and we hope that its godparents will not hesitate to fulfil all of the functions of a godparent in helping to mould its upbringing, by tactful comments and suggestions.

It is not I who should be standing before you, but Mr. Wells, who with his able and enthusiastic staff is superintending the introduction of this important work, and preparing it to play a big part in the life of the community. I am very much indebted to Mr. Wells for priming me about what I should say to you (though I don't saddle him with all that I am going to say). I spoke of his staff as being enthusiasts. This is true in a very real sense. They have a feeling of mission about this work: they feel they are in at the beginning of a big thing: what I hope is that we can make this impression true and use *B.N.B.* as the beginning of other similar projects we have long had in our minds.

Let me for a start take you back a matter of twenty years: to the *Report of the Royal Commission on National Museums and Galleries.* In Part II of the Final Report, issued in January, 1930, paragraph 13, the Commission reported as follows:—

"Central Cataloguing

'In the Report of the Public Libraries Committee[1] a scheme for a central supply of catalogue cards for new publications to libraries throughout the country was recommended. Such a service has, we understand, been carried out for many years past in the United States of America by the Library of Congress. In this country there is no corresponding organization, and each of the great libraries, as well as the numberless smaller libraries, have to prepare their own catalogue slips. Such arrangements would hardly seem to be in accord with efficiency and economy. It was estimated by the Public Libraries Committee that "There are probably in Great Britain six hundred public libraries, university, college, special and institutional libraries, and some private libraries which would subscribe for catalogue cards as soon as the scheme was in full working order". The same Committee also expressed the belief that a Central Cataloguing Agency to supply catalogue cards for new publications to libraries throughout the country would become one of the most useful forms of co-operative service. If such an agency were established in the British Museum, an important advance towards library efficiency, economy and co-operation would be achieved. We share the view of the Public Libraries Committee as to the potential usefulness of a central organization, and we would express the hope that the Central Cataloguing scheme, which has so far made no progress, may receive the earnest consideration of the proper authorities. The Trustees of the British Museum in collaboration, possibly, with the Library Association and with the Central Library for Students would doubtless be able to devise an effective arrangement.' "

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[1] *Paragraphs* 484 *to* 508

It was not, unfortunately, found possible at that time (we must not forget what was the state of affairs in 1930, 1931) to put these recommendations into practice. The idea of a centralized cataloguing agency, producing cards à la Library of Congress, while attractive on paper, certainly presents big problems of organization and, in this case, if the British Museum had been able to undertake the work, big problems of adjustment in cataloguing practice. The difficulties appeared so great that no steps along these lines were taken.

While it remained alive in the minds of librarians the idea lay dormant for a few years until just before the war it was taken up again by Colonel Luxmore Newcombe, the indefatigable head of the National Central Library. Colonel Newcombe's idea (which I know of really only by hearsay) was to try to bring this desirable service into being through the National Central Library, the publishers being asked to supply for the purpose advance copies, or even proofs, of their publications for cataloguing in advance of publication. I do not know how far Colonel Newcombe got with his scheme: the war came and it had, like so many other desirable schemes, to be put into cold storage if not relegated to the category of things it would have been nice to do. It was not forgotten, however, and when after the war the Library Association set up a number of committees to consider post-war library developments, it appeared as one of the items in the report of the Post-war Planning Committee on Library Co-operation, made in 1947. This report recommended among other things the re-consideration of the idea of central cataloguing. Without delay the Library Research Committee of the Library Association set up a small committee to examine the idea afresh and see if there really were any practical steps that could be taken. This committee, over which I presided, consisted entirely of enthusiasts, and at the very first meeting, if I remember right, we agreed that if we were to get anywhere with this idea we had got to get over the difficulties that were associated with cards, and had got to find a scheme which at any rate to start with was simple and straightforward, and could stand on its own feet financially. Once this was agreed, matters proceeded very smoothly. It was decided, subject to the agreement of the Library Association's Council, that steps should be taken to produce a national bibliography and that a strong committee should be established to consider ways and means of bringing the idea to fruition. The Committee which first met in the summer of 1948 consisted of three representatives of the British Museum, three of the Library Association, and one each from the Publishers' Association, the Booksellers' Association and the National Book League. It completed its work of investigation in January, 1949, having received unqualified support from all the organizations concerned, and by 23rd March, 1949, the Council of the British National Bibliography was formally constituted, with members from the British Museum, the Library Association, Aslib, the Booksellers' Association, the Publishers' Association, the British Council, the N.B.L., the National Central Library, and the Unesco Co-operating Body for Libraries, and with the object of 'publishing in appropriate bibliographical form lists of books, pamphlets and other recorded material of whatever nature published in Great Britain, the Dominions and Colonies and/or foreign countries, together with such annotations or further information as may be desirable for the use of librarians, bibliographers and others'.

The actual administration of the work was left in the hands of the Executive Committee, which was made up of one representative each from the British Museum, the Library Association, the Publishers' Association, the Booksellers' Association, and the National Book League. This committee was responsible for all the preliminary investigations and made the preliminary arrangements. (Though it did a great deal of work, Mr. Wells has told us that when he first took up his position as Editor there seemed little more than an idea and a rather ingenuously simple estimate of costs and income !) So far as income is concerned, I am glad to say that our faith in the scheme was not unjustified. Subscriptions have come in splendidly and have considerably exceeded our original estimates. Unfortunately costs are likely also to exceed the estimates, but there is no reason to think that we cannot make a venture like this pay its way. Which is a very important point.

The first number of the *B.N.B.* appeared on 4th January, 1950, and the tenth number will have been delivered to those of you who are subscribers this morning. The number of entries has increased from a bare 25 in Number 1 to something like 250 in the most recent number, and two monthly indexes have appeared, so that it is possible now for some sort of estimate to be made how far it is measuring up to the job it has to do. Before discussing it in any detail let me remind you what we are producing: The *B.N.B.* is published in weekly lists printed on one side of the leaf only, to allow for cutting up and mounting on to cards; the entries are arranged in main subject groups, according to the main classes of Dewey, and each entry is classified according to the same system; each entry is made according to the Anglo-American Cataloguing code and is provided with a serial number. With the last issue for each month an author index is sent out, giving author, short title, publisher, price, classification number and serial number. At the end of the year it is proposed to issue a volume cumulating all the material in the weekly lists. The arrangement of this annual volume will again be classified, but it will be printed on both sides of the paper. It will in any case be a very substantial volume. The method of compilation of the annual volume is by the cumulation of the linotype slugs from which the weekly parts are printed.

The form of the entries is conditioned by two things: first, the need to conserve space and, second, the method of printing. Space is an important consideration, not only from the point of view of expense—the costs of both press work and paper can be increased very considerably if great care is not exercised. You will see from the current issue that we have already had to make modifications in the page headings in order to reduce the number of pages taken up in each number—space is important, not only from the point of view of expense, but also from the point of view of keeping the size of the annual volume within reasonable bounds. As for the second consideration, the linotype method of printing limits us as to the numbers of founts of type we can employ, and while we ourselves would have liked to use an italic in addition to the founts now used, the linotype machine cannot manage more than two founts at once, and it is imperative, in order to meet our time schedules, to have the work done as economically as possible.

Comment on the *B.N.B.* has been remarkably favourable—I say this because it is not easy to produce any form of catalogue, especially a classified one, which does not meet with a great deal of criticism from one quarter or another. We believe that the service offered by the *B.N.B.* goes a long way towards meeting the librarian's need for an up-to-date and fairly full list of current publications and for an authoritative catalogue service. We do not flatter ourselves, of course, that nothing can be done to improve it, and we welcome suggestions for its improvement, and constructive criticisms of all kinds. It seems to me essential that it should be used to the full, and that it must therefore be useful and usable. We do not want just acceptance: this work is for the librarian and we hope he will collaborate with us in producing the best possible result.

I have spoken of the historical background of the *B.N.B.* perhaps at rather excessive length. But I wanted to do so in order to bring out two or three significant features. First of all it will be appreciated that apart from the subsidy given to it in the shape of accommodation (not including fittings) by the Trustees of the British Museum, it is designed as a self-supporting undertaking. Second, the universal agreement, not to say enthusiasm with which the idea was received; third, the speed with which it got under weigh once the bogies connected with the publication of a catalogue on cards were dispelled. It is true that Mr. Cadness Page has demonstrated how using some of the resources of a large firm like that of Messrs. Harrods, it is possible to solve some of those problems, but it must be confessed that never in our calculations did we envisage a charge for our service anything like that which Messrs. Harrods have found it necessary to make.

It is not in any case absolutely certain that all libraries want card catalogues: many of them prefer a list of the type which is being provided by the *B.N.B.* And indeed, like many of the ideas about library work which have been to some extent uncritically adopted and maintained in the past, this one needs to be re-examined. The realistic and critical approach to library work at which I have in mind in making this suggestion has been one of the features of Aslib's work which I have most admired and I hope that it will become a characteristic of library thought—and, when it really begins to appear of writing on library matters, in our library profession generally.

Well now, let me get a little closer to grips with the subject of my talk. What is it that we hope to achieve in the *B.N.B.*? First and foremost an accurate, up-to-date (in a very literal sense) and complete bibliographical record of the British literary output. This we aim at achieving by the publication of lists, every week, of the books which are sent in by publishers, in accordance with the provisions of the Copyright Act, to the Copyright Office of the British Museum. We hope in this way to achieve a fair degree of completeness (subject to what I shall say later about some deliberate exclusions). The question of up-to-dateness presents certain difficulties, though we think we are in a fair way towards overcoming them. Our aim is to include in our weekly list all books published in the week of issue. To do this means asking publishers to send their publications to the Copyright Office three or four weeks before publication: the Copyright Act does not insist on deposit before publication, indeed it allows publishers a month's grace *after* publication, so we have been forced to ask publishers to be kind enough to send in their books in advance. I am glad to say that the response of the publishers, both collectively through the Publishers' Association and individually, has been very encouraging. Trade conditions, however, are still difficult and the margin between deposit in the Copyright Office and publication is often very small. Our printers require copy seven days before publication, and the time available for cataloguing, classifying, indexing and the numerous ancillary tasks is often very small. But it remains our constant aim to include the books in the *B.N.B.* in the week in which they are published. By giving a full catalogue entry, made according, broadly speaking, to the Anglo-American Code, we hope to achieve for all entries a reasonable degree of completeness such as will make them thoroughly satisfactory for all users.

Our second objective is to provide a subject catalogue, which has long been a desideratum for librarians and users of catalogues generally.

To do this we adopted the form of a systematic catalogue arranged according to the Dewey Decimal Classification.

The third purpose of our list is to provide a weekly buying list. The prime requirement for this is unfailing up-to-dateness, for which we rely on the goodwill of the publishers and which, as I have said, has been, with very minor exceptions, readily forthcoming. We think that the fullness of the catalogue entry and the details provided are also important in this respect: they place full information in the librarian's or book-buyer's hands to assist him in his choice. The subject arrangement is also valuable for any whose needs are confined to special subjects.

Our fourth objective is to provide a central cataloguing service. This has ranked as of almost equal importance as a national bibliography. To meet this need the weekly list is printed on one side only of a specially chosen paper, so that the individual entries can be cut out and pasted on to cards which can then be cumulated into one catalogue. Judging by comment which has been made in passing, librarians seem to be shy of this procedure, and it will be interesting to know how far it is being adopted and how successful it is found to be. It is being done in the Reading Room of the British Museum, and I know that there are a number of librarians who have adopted it. The *Bibliography* is not, however, a complete cataloguing service for it does not indicate the index entries required for a classified catalogue or the headings for a dictionary catalogue. But the information is being amassed in the *B.N.B.* office in preparation for the annual cumulated volume, and we are not unmindful of the need for amplification of our service in this respect.

The matter excluded from the *Bibliography* has caused us a great deal of anxious thought and misgiving. Any exclusions are bound to be contentious, and we have quite frankly avoided any attempt at rigid definitions of the categories of excluded material. Emphasis is at all time on inclusion rather than exclusion and we are confident that we are not seriously impairing the usefulness of the list by the exclusions we have decided on. Our original list of suggested exclusions, which it was left to the Editor to modify at his discretion, included: minor fiction and facetiæ, both for adults and children—this has also been, equally vaguely, described as 'cheap novelettes'; recipe booklets; song books and music scores; booklets dealing with horse and dog racing, football pools and other betting systems. It has been found necessary to add periodical and serial publications, except for year books which are included and the first issues of all new periodicals.

Maps and music are excluded, but these form distinct fields of their own, and I am hopeful that before very long we can extend our operations to issue a separate *British National Music Bibliography* and a *British National Map Bibliography*. For both of these there is, I am sure, a considerable need.

The exclusion of certain categories of Government publications has caused us the greatest concern. In view of the card catalogue service, inaugurated by Mr. Cox, Assistant Controller in the Stationery Office, which Mr. Evans is here to talk about this evening, and the excellent lists published by the Stationery Office, it was at first thought desirable, or at any rate possible, to exclude all Government publications. Finally, however, in view of the fact that the Stationery Office did not include any classification symbol, and that the entry supplied by the Stationery Office was not entirely in a form suitable for library catalogues, it was decided to include a selection of the more important publications and publications of general interest, for the benefit of those who were looking to the *B.N.B.* as a cataloguing service. It is not a solution which satisfies us: it is difficult to define precisely the categories which are included and which excluded; and it is also unsatisfactory to be duplicating work which is already being done elsewhere. Can we look forward, I wonder, to some form of co-operation with H.M.S.O. in this part of our common task?

You will see from what I have let fall in the course of this talk that we do not look upon the *B.N.B.* as an isolated undertaking. On the contrary, it is, I hope, the beginning of an organization which will bring about many of the library services which are so badly needed. I have already mentioned maps and music and the problem connected with Government publications; these and other possibilities will have to be worked out on the basis of our experience in conducting the *B.N.B.*

One of the most urgent needs is likely to be for more frequent cumulations of the *B.N.B.* itself. Great inconvenience is caused by having to look through a number of separate weekly lists—though we try to avoid this by the provision of very full index entries each month—and to avoid such inconvenience is one of our chief desires. The system of cumulating slugs, clumsy and expensive in metal as it is, would allow us to produce cumulations more frequently, if necessary, though it could not be done within the present subscription.

What is going to be the effect of the *B.N.B.*? If, as we hope, we have established a central cataloguing service, are we as librarians or information officers going to make full use of it? It seems to me that, in view of the great amount of work which needs to be done in our libraries, in order to put the materials we have fully at the disposal of the users, we *must* use this means of saving labour in one department of our activities in order to utilize it in others. If we do not do so, our continual cries of shortage of staff and inability to do this or that service are so much wind and empty ranting.

Is it too soon to put forward, as a serious practical proposal, on the basis of saving in cataloguers' time now available through the *B.N.B.*, the establishment of a system of co-operative cataloguing? What I have in mind is something like the system of providing analytical entries for articles in periodicals which is in use in the United States. Divided among the university, special and reference libraries of the country, an enormous amount of literature could be analysed and the results made available in a central institution in a very short space of time. We could then take the first step towards providing that kind of information service for which there is so insistent a demand at the present time.

2. CATALOGUING OF GOVERNMENT PUBLICATIONS

By T. C. D. Evans

His Majesty's Stationery Office

(*Summary*)

FOR many years the Stationery Office has produced a day-to-day catalogue of its publications in the form of index cards in order to provide the various Sale Offices of the Department with up-to-date information. Following discussions with the University and Research Section of the Library Association (London Group) it was agreed that provided sufficient demand existed index cards for official publications would be supplied to libraries to enable them to build up their own card catalogues from day to day.

The cards, 5 in. × 3 in. in size, carry all the details provided on the Daily List of Government Publications, and sufficient space is left at the head for libraries to add their own headings, subject references, etc.

The charge for the service is :—

(*a*) £5 per set per annum covering all publications issued and £4 for the second and subsequent sets to the same address.

(*b*) £4 per set per annum for all publications except Statutory Instruments and £3 for the second and subsequent sets to the same address.

These rates cover daily postage; if posted in weekly batches the rates are reduced by 10*s*. per annum for the first set and 5*s*. for subsequent ones.

For the moment major alterations in the scheme cannot be allowed. That there are faults is admitted and criticism of a constructive character will be welcomed, but it must be stressed that even among libraries there are differences of opinion as to what is needed.

The 'copy' for the cards is made up from the Daily List and the cards themselves are produced by duplicating methods. Originally flat duplicating was employed, but insufficient depth of inking was early apparent and a change was therefore made to an offset litho process. In order to maintain the time schedule it is essential for the cards to be produced four on a stencil and subsequently cut. This precludes the use of accurately cut millimetre cards, since it would be uneconomic to put in the expensive rotary cutters which would be necessary.

The low price is only possible by sale in sets and further selection is not possible even though the Department is conscious that some libraries would like this aspect carried further.

For periodicals appearing monthly or more frequently only master cards are produced, whilst in the case of the *London Gazette*, cards are issued only for those supplements containing information of major importance.

Among other uses to which the cards are put in the Stationery Office is the building up of its catalogues, and it cannot be too strongly emphasized that booksellers are the major users of these catalogues, which have therefore to be in the form to which booksellers are accustomed.

To sum up, the main purpose of the production of these cards by the Stationery Office is to provide up-to-date information for its own Sale Offices, and whilst anything possible will be done that will help other users, the main difficulty is time.

THE WORK OF ASLIB

July 1948 to December 1949

THE formation, in May, 1949, of the new Aslib, incorporating the Association of Special Libraries and Information Bureaux and the British Society for International Bibliography, led to a change in the dating of Aslib's financial year, which will now run from January to December instead of from July to June. This report, therefore, extends over eighteen months and links the activities of the old organization with those of its successor.

Amongst many important changes, first place must be given to the retirement of Miss E. M. R. Ditmas from the directorship. As the principal officer of the Association since 1933, she had been largely responsible for its transformation from a small group of enthusiasts to a recognized institution with national and international responsibilities. Miss Ditmas, who for some time had wished to give up the increasing burden of administrative responsibility in order to devote more time to study and research, felt that the substantial completion of the changes recorded below made this an appropriate moment to do so. The Council, in accepting her resignation, adopted the following minute:

> 'Her intellectual distinction, her quick insight into new developments in documentation and her understanding of their significance for the wider world have ensured the high academic level of Aslib's work and its appreciation by outsiders. At the same time her personal sympathy and accessibility have kept it in touch with the daily needs and interests of a diverse and growing body of members. Her tenacity has ensured Aslib's survival through difficult times and its progress in circumstances that have never been easy; her personality has gained for Aslib something of the respect and affection which those who have worked with her will always feel for her personally. She has served Aslib faithfully and well through a crucial time, and has laid solid foundations for its future growth. The Council looks forward to her continued association with that growth, and wishes her every happiness in the years to come.'

The members of the Association will all desire to associate themselves with the appreciation and good wishes expressed by the Council.

Miss Ditmas had desired that her Directorship should terminate at the end of 1949, but agreed to continue in office for a further two months until her successor, Mr. Leslie Wilson, M.A., formerly foreign editor of *The Times Educational Supplement*, could take up his duties. The Council feels sure that under his able guidance and direction the future development and progress of Aslib is fully assured. This appointment, though but one, and an important one, of the many developments, may prove to have been a veritable milestone in the history of the Association, now entering upon the 26th year of its existence.

The termination in 1949 of the first five-year period of financial aid by the Government through the Department of Scientific and Industrial Research, and the opening of negotiations for a further grant on better terms, led to the necessity for a close evaluation of Aslib's activities in order to draw up a programme for the next five years. This revealed that Aslib's most pressing problems, in the autumn of 1948, were due in large measure to overcrowding and lack of modern equipment at the Aslib office in Bloomsbury Street, and to the fact that lack of capital made it almost impossible for Aslib to remedy this state of affairs out of its own resources. The investigation also showed clearly that the increase in printing and other overhead costs, together with the natural growth in services, including free periodicals, which Aslib was now giving to its members, were not being adequately met by the membership subscriptions, and one of the conditions of the renewal of Government aid was that Aslib should increase the subscription rates for new members and should appeal to existing members to consider making a corresponding increase in their contributions. As will be seen from the notes under 'Finance', this appeal met with an encouraging response and did much to help Aslib through a most critical year. The terms of the new grant will also be found under that heading.

Once the support of the Government was assured, the Council of Aslib gave its serious attention to the possibility of finding better premises. Unfortunately, suitable accommodation was both very scarce and prohibitively expensive. Countless buildings were inspected and various suggestions were laid before the Council, but it was not till October, 1949, that the premises at Palace Gate, recently derequisitioned by the Ministry of National Insurance, became available. It would be difficult to exaggerate the value of the work performed by the Hon. Treasurer in securing these premises and supervising the transfer from Bloomsbury. The necessary redecoration was made possible through a special Government grant, and the same fund enabled Aslib to instal additional furniture and equipment which was so desperately needed. The move to 4 Palace Gate, Kensington, W.8, was completed by the end of January, 1950.

Considerable changes among the staff also took place in 1949. In August, Mr. Philip May, who had acted as Deputy Director and who had done useful work in the drafting of the new *Memorandum and Articles of Association*, left to take up another post. His loss was felt in several directions in which his particular experience had been so helpful. In November Mrs. Nicolson left Aslib to be married, and in December Mrs. Fischer, the librarian, left to take up work in the British Transport Commission. In the interests of economy the Council decided not to fill these positions for the time being, particularly as it was felt that the final pattern of the staff could not be decided until new premises made possible a better use of existing personnel.

Despite the inevitable checks caused by reorganization and the move, routine activities have proceeded as usual, and are summarized below under their respective headings.

The Council

The legal formalities necessary upon the incorporation of the new Aslib were not completed until 24 May, 1949, and as a consequence the combined Councils of the British Society for International Bibliography and the Association of Special Libraries and Information Bureaux, which took office as a Joint Council in January, 1948, had perforce to continue to direct the Association's affairs until the election of the Council of the new Aslib in August, 1949. A full list of the Joint Council was published in the February, 1948, issue of *Aslib Information.* During this period the Council suffered a serious loss through the sudden death, on 13 November, 1948, of Dr. S. C. Bradford, President of the British Society for International Bibliography and long-standing member of the Aslib Council.*

The Council of the new Aslib was elected at the First General Meeting which was held on 19 August, 1949, the list of names being printed in full in the August, 1949, issue of *Aslib Information.* Dr. Percy Dunsheath, C.B.E., M.A., D.Sc., M.I.E.E., became President of the new organization, and Sir John Forsdyke,

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* Obituary notice will be found in *Aslib Information*, December, 1948, and *Journal of Documentation*, December, 1948, Vol. 4, No. 3.

K.C.B., M.A., F.S.A., A.R.I.B.A., Professor R. S. Hutton, M.A., D.Sc., Sir Harry Lindsay, K.C.I.E., C.B.E., and Sir Henry Tizard, G.C.B., A.F.C., D.C.L., LL.D., F.R.S., F.Inst.P., F.R.Ae.S., honoured Aslib by accepting the Council's invitation to become Vice-Presidents. An account of the proceedings of the First General Meeting was printed in the September, 1949, issue of *Aslib Information.*

The Executive and Finance Committee

The Executive and Finance Committee, elected in January, 1948, continued in office until September, 1949, holding eleven meetings during this period.

The new Executive and Finance Committee was appointed by the Council at its first meeting on 11 September, 1949, and is as follows: Mr. C. Le Maistre (Chairman of Council), Mr. G. Woledge (Honorary Secretary), Mr. J. E. Wright (Honorary Treasurer), the Chairman of the four Committees (Education, Conference and Meetings, Publications, and Information and Library), Mr. Agard Evans, Mr. J. F. Stanley, Miss N. Sullivan and Dr. D. J. Urquhart. This Committee met three times in 1949.

Finance

Owing to the change in the beginning of Aslib's financial year, there are two sets of audited accounts covering the 18 months under review, i.e., for the period 1 July to 31 December, 1948,[*] and again for the twelve months ending 31 December, 1949. These accounts are open to inspection by members. As indicated in the *Year's Work of Aslib*, 1947-8, printed in *Aslib Proceedings*, Vol. 1, No. 2, the development of the organization from a small association of specialists to an institution with national and international responsibilities had created a new and difficult financial situation which was even then receiving the anxious attention of the Aslib Council. By the autumn of 1948 the excess of expenditure over income was reaching an uncomfortably high level yet it seemed impossible to carry out drastic economies without curtailing services to members, a policy which would inevitably have led to a decline in membership and this in turn to a further decrease of income. At the same time negotiations with the Department of Scientific and Industrial Research were in progress regarding the possible renewal, for a further term of five years, of the Government grant which had been of such signal benefit to Aslib since 1944. Early in 1949 a new grant was offered, on a pound-for-pound basis, provided that Aslib could increase its membership, its membership income, and the all-round services it was prepared to offer. The Council therefore agreed to raise the rates of subscriptions for all new members and to appeal to existing members to make corresponding increases in their contributions. On this understanding, the Department agreed to new terms of grant as follows:

1949—£2,500 for a minimum total of £2,500 grant-earning income, plus £100 for every completed £100 grant-earning income up to a maximum additional £500.

1950—£4,000 grant for a minimum of £4,000 grant-earning income, plus £100 for every completed £100 grant-earning income up to a maximum additional £1,000.

1951
1952 }—£5,000 grant for a minimum of £5,000 grant-earning income, plus £100 for every completed £100 grant-earning income up to a maximum additional £1,000.
1953

To this generous offer was added a special grant for capital expenditure on new equipment and for special projects in 1949 and 1950.

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[*] Circulated to all members in a printed leaflet August 1949.

In accordance with this policy, as subscriptions became due month by month throughout 1949, corporate members of Aslib were approached and asked to increase their contributions. The response has been most encouraging, over 73 per cent of those approached having agreed to bring their subscriptions into line with the rates fixed for new members. This increased support has proved of the utmost value since it enabled Aslib to earn the higher Government grant in 1949 which, in turn, made it possible to move into better premises. More spacious offices have removed a cause of frustration felt by the staff who could not give of their best in the overcrowded and ill-equipped premises at Bloomsbury Street.

Membership

Membership increased to 1,052 on 31 December, 1949, as against 1,010 on 30 June, 1948. The approximate distribution is now as follows: Research associations, learned societies, etc., 32·34 per cent; individuals, 19·12 per cent; industrial and commercial organizations, 19·98 per cent; overseas members, 19·61 per cent; British Government Departments, 8·95 per cent.

A list of members, grouped alphabetically under countries, and with a further classification by subjects, is in the press and will be issued as *Aslib Proceedings*, Vol. 1, No. 3.

Some preliminary work was done towards the organization of a drive to secure new members. It is planned to conduct a systematic campaign during 1950 so that the fullest advantage may be taken of the generous grant promised by DSIR.

The Northern Branch

During the period under review the Northern Branch organized two one-day conferences and three ordinary meetings.

The first of the conferences took place on 7 December, 1948, at Newcastle upon Tyne on the general theme of the value of an organized information service to industry. The Chair was taken by Mr. R. Trevor Jenkins, Technical Manager of Vickers-Armstrongs, Ltd., and papers were presented by Dr. V. E. Parke, Mr. Austin Hinton, Mr. R. O. MacKenna, Mr. T. E. Nicol, Miss J. Scurfield, Mr. R. Brightman and Miss E. M. R. Ditmas. The conference, which was opened by the Right Honourable the Lord Mayor of Newcastle upon Tyne, Alderman T. McCutcheon, J.P., was organized largely by a local committee under the chairmanship of Mr. E. Austin Hinton and with the aid of Mr. Cahill-Byrne who acted as Hon. Secretary. An account of the conference was printed in the January, 1949, issue of *Aslib Information*, and it is intended that the papers, in full or in summary, shall ultimately appear in *Aslib Proceedings*.

A second one-day conference was organized in Edinburgh on 16 May, 1949, on the subject of information and library services in Scotland. The conference was opened by Sir John L. Falconer, a former Lord Provost of Edinburgh, and the Chair was taken by Mr. Douglas A. Foulis, President of the Edinburgh Chamber of Commerce. Papers, which in due course will appear in *Aslib Proceedings*, were presented by Dr. L. W. Sharp, Dr. D. G. Brown, Mr. P. W. Thomas, Mr. R. Brightman and Miss E. M. R. Ditmas. The conference then considered a proposal that a Scottish Branch of Aslib should be created and, the response being favourable, the Steering Committee which had been responsible for the organization of the conference was asked to go forward with the election of a Committee and the other steps necessary for the formation of a new Branch. An account of the conference appeared in the June, 1949, issue of *Aslib Information*.

The first of the ordinary meetings of the Northern Branch was held on 28 January, 1949, to consider the training of the Information Officer, and in particular the desirability or otherwise of instituting a post-graduate qualification for such officers. This meeting was a consequence of the discussion on the training of the Information Officer at the September Annual Conference in 1948, and was reported in *Aslib Information*, March, 1949.

Sir Charles G. Renold presided over another meeting on 28 October, 1949, when Mr. A. D. Butchart, of the Manchester Joint Research Council, presented a paper on 'Information work in the small firm'. Mr. Butchart was followed by Mr. E. N. Simons, of Messrs. Edgar Allen & Co., Ltd., who spoke on 'How the manufacturer can help the libraries', with special reference to trade literature.

The third meeting of the Northern Branch was held on 9 December, 1949, at Liverpool, when Mr. S. C. Jennings, of Dunlop Rubber Co., Ltd., gave a talk on 'The organization of works visits', and was followed by Mr. E. N. Simons speaking on 'The preparation of technical literature'. These meetings were reported respectively in the November and December, 1949, issues of *Aslib Information.*

The present number of members of the Northern Branch is 206, 27 other members being transferred during the year to the newly formed Scottish Branch. The officers of the Branch are as follows: Chairman, Mr. R. Brightman; Vice-Chairman, Mr. E. N. Simons; Honorary Secretary, Miss L. Wolff; Honorary Treasurer, Dr. J. C. Withers.

The Scottish Branch

The decision that the formation of a Scottish Branch, as distinct from the existing Northern Branch of Aslib, was desirable was taken at the Edinburgh Meeting of the Northern Branch reported above. The Steering Committee of the Conference organized a postal ballot to elect an Interim Committee to conduct the preliminary negotiations. Dr. D. G. Brown was elected Chairman, Mr. C. J. Shimmins, Clydesdale & North of Scotland Bank, was re-elected Honorary Treasurer, and Mrs. Margaret Spence, Scottish Seaweed Research Association, continued as Honorary Secretary.

The Interim Committee has already organized a joint meeting with the Edinburgh and East of Scotland Branch of the Library Association on 26 October, and has in hand a programme of meetings and a one-day conference for 1950.

Conferences and Meetings

The 1948 Annual Conference was held at Ashorne Hill, near Leamington Spa during the week-end 17 to 20 September. A full account, with the papers presented, was published in *Aslib Proceedings*, Vol. 1, No. 2.

The 1949 Annual Conference was also held at Ashorne Hill during the week-end 9 to 11 September; papers and an account of the meeting are being published in *Aslib Proceedings*, Vol. 1, No. 4.

During the 18 months under review, in addition to the meetings organized by the Northern and Scottish Branches, a number of afternoon or evening meetings of Aslib members was held in London. In most cases the papers given at these meetings will be printed, in whole or in summary, in *Aslib Proceedings*, but a list of dates and speakers is given overleaf

1948

29 September	(jointly with the Society for Visiting Scientists). Dr. R. S. Ranganathan, President of the Indian Library Association, on 'A self-perpetuating classification. The need and the possibility.' (Published in the *Journal of Documentation*, Vol. 4, No. 4, March, 1949.)
27 October	Standardization in documentation. A discussion to which contributions were made by Mr. G. A. Lloyd, Mr. F. L. Kent and Miss E. M. R. Ditmas.
17 November	Symposium on Classification. 'Fundamentals of the Bliss Classification' by Mr. L. A. Burgess, and 'Fundamentals of Ranganathan's Colon Classification' by Mr. A. J. Wells.
15 December	Mr. G. A. Shires, 'Information from the advertisement pages,' and Mr. J. E. Wright, 'Re-arrangement and re-cataloguing of a library of books'.

1949

16 February	Symposium on microphotography from the users' point of view: contributions by Mrs. L. Moholy, Mr. H. R. Verry and Mr. H. Wilson.
23 March	Mr. J. P. Lamb, 'The Sheffield system of interchange of technical periodicals,' and Mr. Geoffrey R. Edwards, 'The Royal Society of Medicine's service to medical libraries'.
5 October	Two special library problems. Mr. W. G. Watts and Mr. B. Chibnall on 'Putting the special library over to its users', and Mr. C. W. Hanson and Mr. D. C. Henrick Jones on 'The best use of library statistics'.
2 November	Dr. Alexander King, 'The activities of the "King" Committee' (Technical Information Services Panel of the Research and Productivity Committee of the Advisory Council on Scientific Policy), and Dr. D. C. Martin, 'The practical results of the Royal Society's 1948 Scientific Information Conference'.
2 December	A discussion on the Unesco/Library of Congress Bibliographical Survey, second interim report, opened by Mr. Geoffrey Woledge.

The Conference and Meetings Committee as elected in January, 1948, remained in office until September, 1949, when Council invited the following to serve:

Mr. H. Hyams (Chairman), Mr. W. Ashworth, Miss F. M. Birkett, Mr. R. Brightman, Miss M. Couldrey, Mr. C. E. C. Hewetson, Mr. F. L. Kent, Miss Barbara Kyle, Mrs. J. Lancaster-Jones, Miss L. G. Thomerson.

A sub-committee, consisting of Miss Barbara Kyle (Chairman), Miss F. M. Birkett, Mr. C. E. C. Hewetson, Mrs. J. Lancaster-Jones and Miss L. G. Thomerson, was appointed to organize the 1949-50 winter meetings which, by the courtesy of the Institution of Electrical Engineers, have again been held in the Institution's lecture room.

THE WORK OF ASLIB, 1948–9

Education

The Education Committee appointed in January, 1948, served until September, 1949.

The training of the Information Officer, and the desirability or otherwise of instituting a qualification for such officers, had been one of the main themes at the 1948 Annual Conference, but the voting for and against was so even that the question was referred back to the Aslib Council. The Council felt that, in view of the lack of conclusive evidence of an immediate need for a paper qualification for Information Officers, Aslib's most appropriate course of action for the present would be to take a continuing interest in the training of non-public librarians, with special reference to the revised syllabus for the Library Association examinations, and to organize courses of instruction in information work.

An Aslib Study Course for newcomers to information and special library work was organized from 26 to 29 April, 1949, and was held, as in former years, at Chaucer House by courtesy of the Library Association. Mr. C. W. Hanson and Miss J. Fulford, Information Officer and Librarian respectively of the British Scientific Instrument Research Association, designed the course as a whole on the theme, 'The technique of handling enquiries'. Over 80 students registered for the course which, as usual, included a number of visits to special libraries.

A course of ten lectures for senior Information Officers was also organized, starting in May, 1949, with average attendance of 35 for each lecture. The lecturers and subjects are listed below:

20 May	Dr. B. J. A. Bard	'The value of an information service.'
21 May	Mr. Stephen Heald	'Special factors in the organization of information services.'
10 June	Mr. R. L. W. Collison	'The technique of answering enquiries,' Part I.
11 June	Mr. R. L. W. Collison	'The technique of answering enquiries,' Part II.
24 June	Miss K. M. L. Simpson	'The co-ordination of information work in a research organization.'
25 June	Dr. J. C. Withers	'Information Bureau administration.'
8 July	Mr. F. C. Francis	'Editorial procedure: description of recently agreed standards of layout, etc.'
9 July	Dr. J. G. Cockburn	'Subject indexes to complete volumes of periodicals.'
22 July	Miss Ruth M. Jacobs	'Information from House Journals.'
23 July	Mr. G. Goulden	'Use of trade catalogues in information work.'

In September, 1949, at the first meeting of the new Aslib Council, the following were invited and agreed to serve on the Education Committee:

Dr. V. E. Parke (Chairman), Mr. D. V. Arnold, Dr. W. Bonser, Miss M. Couldrey, Mr. A. E. Cummins, Mr. C. W. Hanson, Miss Barbara Kyle, Mrs. J. Lancaster-Jones, Mr. E. R. McColvin and Mr. C. W. Pendleton.

This Committee did not meet again in 1949 but, very early in 1950, was responsible for organizing the 1950 study course for beginners in special library work.

Publications

The Publications and Editorial Committee appointed in January, 1948, continued in office under the Chairmanship of Dr. R. S. Schultze until September, 1949. The *Journal of Documentation* continued to be edited by an Editorial Board consisting of Mr. F. C. Francis, Dr. D. J. Urquhart, Mr. G. Woledge, and Miss E. M. R. Ditmas as Managing Editor. A small committee was set up to advise the Director on the production of *Aslib Proceedings* as and when required. The Committee included Mr. D. V. Arnold, Mr. J. J. Eaton, Dr. R. S. Schultze, Mr. J. E. Wright and the Director.

Mr. D. V. Arnold has kindly consented to continue to act as Honorary Advisory Editor of the *Aslib Book-List* which has been issued monthly since March 1948. The monthly bulletin, *Aslib Information*, remains the house journal of the organization.

As reported in the *Year's Work of Aslib*, 1947-8, published in *Aslib Proceedings*, Vol. 1, No. 2, material hitherto published in the *Proceedings of the British Society for International Bibliography* and the Aslib *Reports of the Proceedings of the annual conference* is now being printed in *Aslib Proceedings*. This new Aslib periodical is scheduled to appear four times in the year but the Council's decision to reduce the number of senior staff in an effort to balance the budget in 1950, together with the additional load on the Director's time arising from negotiations with the Department of Scientific and Industrial Research concerning the grant, the search for new premises and the large-scale reorganization within Aslib consequent upon Miss Ditmas's resignation from the Directorship, all had an adverse effect upon the punctual publication of the 1949 issues. A determined effort is being made to catch up on arrears during 1950.

During the period under review, in addition to the issue of its periodicals, Aslib's chief publishing activities were concerned with the printing of three *Guides to sources of information in Great Britain*. These were No. 2: *Agriculture and allied interests* (May, 1949); No. 3: *Beverages and Food* (July, 1949); No. 4: *Textiles and allied interests* (December, 1949).

Mr. S. Trehearne Cope's bibliography on *Heraldry, flags and seals*, first published in the *Journal of Documentation*, Vol. 4, No. 2, was issued as a separate offprint at the end of 1948.

The new Publications and Editorial Committee appointed by the new Aslib Council in September, 1949, consisted of the following:

> Dr. R. S. Schultze (Chairman), Mr. D. V. Arnold, Mr. W. Ashworth, Mr. J. J. Eaton, Mr. B. Fullman, Mr. L. M. Harrod, Mr. W. R. Le Fanu, Professor R. S. Hutton, Mr. E. R. McColvin, Miss L. G. Thomerson, Mrs. A. M. Whitrow and Mr. G. Woledge.

Information and Library Section

The committee appointed in January, 1948, continued in office until September, 1949.

During the 18 months under review 4,162 enquiries were recorded in the Information Section, there were 146 requests for registered translators, and 3,319 items were ordered through the Document Reproduction Service.

The library continued to develop as much as was possible in the intolerably over-crowded conditions at Bloomsbury Street. Over 100 periodicals are received regularly, and Aslib's valuable collection of specimen copies of specialist journals is steadily growing. (A list of the more important periodicals received regularly was printed in the July, 1949, issue of *Aslib Information*.) Five hundred and seventy-seven books and pamphlets have been accessioned for the Aslib library during this period, and 722 loans have been made from the Aslib collection. The move to new premises, and the provision of adequate bookcases, pamphlet boxes and indexes, should greatly facilitate the proper growth of the library as a tool for Aslib's work.

The compilation of the Aslib *Guides to sources of information in Great Britain* and the monthly *Aslib Book-List* both form part of the work of the Information Section, and, in addition, Aslib organizes annotations on recently printed British scientific and technical books for *British Book News*.

The potentialities of the Aslib Register of Specialist Translators and the embryo Aslib index to scientific and technical translations occupied much of the time of the Information and Library Committee following the specific recommendations for their development made at the Royal Society's Scientific Information Conference in June, 1948. While agreeing that it was in conformity with Aslib's policy that these services should be developed, action in 1949 was postponed until such time as the problems of new premises and reorganization of the Aslib staff had been solved. Means to implement the Royal Society's recommendations remain, however, as a priority for consideration by the new Director in 1950.

In September, 1949, the following were invited by the new Aslib Council and agreed to serve on the Information and Library Committee:

Mr. F. L. Kent (Chairman), Mr. R. L. W. Collison, Miss M. Gosset, Dr. W. O. Hassall, Mr. J. P. Lamb, Mr. A. E. Tooke, Dr. D. J. Urquhart, Mr. W. E. White and Mr. H. J. Watling.

Committee on the Mechanized Distribution of Information

This Committee, originally set up in 1947 at the request of the Department of Scientific and Industrial Research to discuss the uses of mechanization in library and technical information work, met twice during the autumn of 1948. It was then agreed that the first phase of its work had been completed but that, particularly in view of recommendations made at the Royal Society's Scientific Information Conference, there still remained valuable work that could be done by it. The Committee, therefore, remains in being, and Aslib retains its special interest in the collection of data concerning the application of mechanization to library problems. The Committee did not, however, meet during 1949, and the attempt to circulate current information to its members by post proved unsatisfactory. A reconsideration of its functions will be one of the tasks for 1950.

The British National Committee on Documentation

During the period under review Aslib has continued to provide the secretariat for the British National Committee on Documentation which was inaugurated in the early part of 1948 for the purpose of promoting the co-ordination of documentation in the United Kingdom, and to be the British National Committee of the International Federation for Documentation in succession to the British Society for International Bibliography. Aslib also undertook the distribution in the U.K. of the *Review of Documentation* for the International Federation for Documentation. As stressed by the Chairman of Council, Mr. C. Le Maistre, at the 1949 Annual Conference of Aslib, Aslib's particular interests in special librarianship and documentation make it very desirable that it should be in contact with international documentation developments, but the degree to which it should participate in such movements, and the extent of the support which it can give, in cash or in kind, are matters which must receive the close attention of the Aslib Council.

British Union Catalogue of Periodicals

It is with the greatest regret that we have to report the sudden death, on 29 December, 1949, of Dr. Alfred Loewenberg, Editor and Executive Secretary of the British Union Catalogue of Periodicals. Mr. J. D. Stewart, Chief Librarian of the Bermondsey Public Library, has been appointed as his successor.

Representatives of Aslib on the BUCOP Council for 1948-9 were:

Dr. W. Bonser, Mr. A. E. Cummins (succeeded by Mr. F. L. Kent in September, 1949), Mr. John Hampden and Professor R. S. Hutton.

A report on BUCOP is being published in *Aslib Proceedings*, Vol. 1, No. 4.

Relations with other Organizations

As Director, Miss E. M. R. Ditmas continued to represent Aslib on the National Co-operating Body for Libraries of Unesco. During the period under review the following subjects received special consideration: the Unesco scheme for Book Coupons; Unesco's International Conference on Scientific Abstracting held in 1949; Copyright; and the Unesco/Library of Congress Bibliographical Survey. Aslib was also represented by three members—Mrs. J. Lancaster-Jones, Mr. W. R. Le Fanu and Miss Ditmas—on the Unesco Sub-Committee for Library Co-operation with C.A.R.E. (Co-operative for American Remittances to Europe Inc.) to organize the distribution in the U.K. of books sent from the U.S.A. for British libraries.

Aslib has continued to be closely concerned with the documentation activities of the British Standards Institution, being represented on the sub-committees responsible for the English edition of the U.D.C., the standardization of the terminology of document reproduction, the materials for document reproduction, and the transliteration of Cyrillic characters, as well as on the main Technical Committee OC/20 Documentation Standards.

The Director represented Aslib on the Council and on the Executive Committee of the National Book League, and in particular served on the special *ad hoc* committee which considered the N.B.L.'s proposals for the provision of books to industry.

Aslib representatives continued to serve on the Syllabus Sub-committee of the Education Committee of the Library Association, with special reference to the provision in the revised syllabus of subjects suitable for students coming from non-public libraries.

Aslib helped in the organization of the vacation course on library co-operation held during the week 4 to 9 April, 1949, by the University of London School of Librarianship and Archives. Mr. D. Grenfell, Information Officer of Aslib, attended and acted as group editor for special libraries. (An account of the course, under the title 'An inquiry into co-operation', by R. Stavely, was published in the *Journal of Documentation*, Vol. 5, No. 2.)

Close contacts with international organizations were maintained throughout the period, and Miss Ditmas, as Chairman of the Joint IFLA/FID Committee on Special Libraries and Centres of Information, attended the fourteenth session of the International Library Committee of the International Federation of Library Associations during its London meeting in September, 1948. Mrs. J. Lancaster-Jones represented the British National Committee at the Paris meeting of the Council of the International Federation for Documentation in June, 1949; and, in his capacity of President of the F.I.D., Mr. C. Le Maistre has continued to keep Aslib in close touch with that body and with Unesco. There has also been considerable correspondence between Aslib and a number of American organizations engaged in similar work. Aslib, of course, through its own membership has contacts in all parts of the world, and it is worth recording that, in spite of the overcrowding at the old premises, Aslib was again asked to accept student workers, amongst whom we were glad to welcome Miss M. E. McGrath from the South African Institute for Medical Research, and Mr. A. Sabet, introduced by the Egyptian Education Bureau.

Other organizations on which Aslib was represented during the year were the National Central Library (Mrs. J. Lancaster-Jones), the Council of the British National Bibliography (the Director), and the British National Committee on Building Documentation (Mr. P. May, succeeded by the Director).

No report on the year's work of Aslib would be complete without a tribute to those members and Committees who have given so freely of their time and energies to Aslib's affairs and to those other members who, in countless ways ranging from voluntary clerical help at Conferences or in the Aslib office to co-operation in the location of information, have added their vitally important contribution to Aslib's development. Whatever service Aslib has been able to render to members in the past, and however far it is able to progress in the future, it must always be recognized that its success and its stability lie rooted in the faith and support of its members.

March 1950

G. WOLEDGE
Secretary

VOL. 2, No. 3 ASLIB PROCEEDINGS August 1950

British Standards Institution Monthly Information Sheet

Issued by B.S.I., 24/28 Victoria St., Westminster, London, S.W.1

AUGUST, 1950

Telephone enquiries for copies of British Standards VICtoria 0522
Other enquiries . . . . ABBey 3333

CONTENTS

BRITISH STANDARDS :

New and revised British Standards 1
Amendments to British Standards 3
Future publications 3
New work started 4
Draft standards circulated for comment 5

OVERSEA STANDARDS :

New oversea standards added to B.S.I. library 7
Draft standards received from oversea countries 14
New work started in oversea countries 16

NEW STANDARDS ISSUED

B.S.

1553 Part 2 : 1950 Graphical symbols for power generating plant. 2/6d.

Contains graphical symbols for use in diagrams relating to power generating plant, including steam and internal combustion engines and turbines, and auxiliary plant, with examples of diagrams showing the use of the symbols.

1553 Part 3 : 1950 Graphical symbols for compressing plant. 2/–

Contains graphical symbols for use in diagrams relating to compressing plant, including applications to air-operated switchgear, with examples of diagrams showing the use of the symbols.

1657 : 1950 Buttress threads. 3/–

Provides for two forms of thread, designated respectively 'standard' and 'special' forms.

The 'standard' form of thread has a pressure flank angle of 7° with an included angle between the pressure and trailing flanks of 52°.

The 'special' form has the pressure flank normal to the axis of the screw with an included angle between the pressure and trailing flanks of 52°.

B.S.

As the use of buttress threads is confined mainly to specially designed components, no attempt has been made in the standard to introduce a rigid pitch/diameter relationship, but the standard does include preferred series for both diameters and for pitches.

Tables of tolerances and allowances are provided for three classes of fit, namely, close, medium and free.

A recommended system of gauging is included with notes on the appropriate types and design sizes of the gauges. An explanation is also given of the method of measurement of the effective diameter of buttress threads together with tables of dimensions for the best sizes of thread measuring cylinders.

1659 : 1950 Tractive armature direct-current neutral track and line relays for railway signalling. 2/6d.

Supersedes B.S. 452 : 1932 and B.S. 475 : 1932, and covers tractive armature d.c. neutral track and live relays for 2, 4 or 6 contact-arms. Constructional requirements including overall dimensions, electrical tests and performance characteristics are specified. Recommendations on the positioning and marking of terminals are given for guidance in future designs.

1660 Part 1: 1950 Self-holding tapers. 5/-

establishes in Section 1 a simplified series of self-holding tapers by a selection of those sizes from the Metric, Brown & Sharpe and Morse series which are most commonly in use and which at the same time provide a standard series having approximately uniform increments in size. Section 2 provides for a gauging system for the verification for self-holding tapers and includes dimensions and tolerances and certain general requirements for plug and ring gauges of several types. A recommended method of checking the wear of gauges is given in an Appendix. Shanks and sockets made to this Standard are interchangeable with those made according to existing practice, and it should be noted that the information regarding Brown and Sharpe and Morse Tapers which was, as an interim measure, included in B.S. Hand Book No. 2: British Standards for Workshop Practice, has now been superseded by the issue of the present Standard.

AIRCRAFT

G 127 : 1950 Power transformers for aircraft purposes. 2/-

REVISED STANDARDS ISSUED

B.S.

185 Part 1 : 1950 Glossary of aeronautical terms. 7/6d.

Contains definitions of terms used in aeronautics and aerodynamics generally, structure and movement of aircraft, and specialized terms relating to heavier-than-air aircraft, including rotorcraft, and lighter-than-air aircraft. An Appendix is devoted to aerodynamic symbols and notation.

L.

REVISED STANDARDS ISSUED—*(Contd.)*

B.S.

519 : 1950 Tractive armature direct current neutral-polar line relays for railway signalling. 2/6d.

Provides for relays having up to four neutral contact-arms and up to four polar contact-arms and is a revision of the 1933 edition. Constructional requirements, including overall dimensions, electrical tests and performance characteristics are specified. Recommendations on the arrangement and marking of terminals are given for guidance in future designs.

717 : 1950 Combustion testing of domestic appliances burning town gas. 3/6d.

Covers requirements as to the completeness of combustion in domestic gas appliances assessed on the CO/CO_2 ratio. It lays down methods for measuring the CO/CO_2 ratio with details of their application to cooking appliances, water heaters and space heaters under normal and abnormal conditions of ventilation.

AMENDMENT SLIPS ISSUED

Ref. No. B.S.

PD 1060 Amendment No. 4 to B.S. 970 : 1947 Wrought steels

PD 1064 Amendment No. 1 to B.S. 1538 : 1949 Intrinsically-safe transformers for bell-signalling circuits

PD 1070 Amendment No. 3 to B.S. 229 : 1946 Flameproof enclosure of electrical apparatus

FUTURE PUBLICATIONS

The following publications will be issued in the near future. This preliminary advice is given for information purposes but they will be listed, as usual, when published.

B.S.

240 Part 2 : 1950 Steel balls for Brinell hardness testing. 2/–

673 : 1950 Pneumatic tools and accessories. 3/–

714 : 1950 Cartridge fuse-links for use in railway signalling circuits. 2/–

903 : 1950 Methods of testing vulcanized rubber. 21/–

912 : 1950 Bolted flameproof cable-couplers, primarily for use in mines. 2/–

1338D : 1950 Chart of sizes for knickers. 4/6d. each, 6/– post free

1338E : 1950 Chart of sizes for lingerie (other than knickers). 4/6d. each, 6/– post free

1338F : 1950 Chart of sizes for nightwear. 4/6d. each, 6/– post free

FUTURE PUBLICATIONS—(*Contd.*)

B.S.	
1501/6 : 1950	Steels for the chemical, petroleum and allied industries. 12/6d.
1507/8 : 1950	Steel pipes and tubes for pressure vessels. 10/6d.
1583 : 1950	One-mark bulb pipettes. 2/–
1649 : 1950	Guards for shaft couplings. 2/–
1669 : 1950	Industrial perforated plates. 2/–
1675 : 1950	Weft pirns (taper fit) for direct spinning of cotton. 2/–
1676 : 1950	Mobile heaters for tar and bitumen. 2/–
1677 : 1950	Draughtsmen's drawing pins. 1/–
A 27 : 1950	Medium tensile steel hexagonal nuts. 1/–
S.112 : 1950	40 ton semi-free cutting steel. 1/–
S.113 : 1950	45 ton carbon steel. 1/–
S.114 : 1950	55 ton manganese-molybdenum steel. 1/–

STANDARDS WITHDRAWN

B.S.	
452 : 1932	Tractive armature direct-current neutral track relays
475 : 1932	Tractive armature direct-current neutral line relays

(The above are now replaced by B.S. 1659 : 1950 Tractive armature direct-current neutral track and line relays for railway signalling. 2/6d.)

NEW WORK STARTED

When draft specifications covering the following subjects are available announcements will be made in the Monthly Information Sheets. Enquiries for copies of the draft should not be made until these announcements appear.

Rubber footwear for hospital use
Duplicating machines
Dairy buildings
Metal crates (extension B.S. 1133)
Composite containers (revision of part of B.S. 1133)
Dummy sparking plugs, blanking caps and washers for aircraft
99% aluminium bars and sections (revision B.S. L 34)
Aluminium—5% magnesium alloy wires for rivets for aircraft
Aluminium—manganese alloy sheets and strips (soft) for aircraft
35–45 ton carbon steel (revision B.S. 5 S.1)
Terms and definitions for fillings for bedding and upholstery
Radiator valves

DRAFT STANDARDS CIRCULATED FOR COMMENT

Draft standards are liable to modification before adoption and issue as British Standards. Comments on the draft are welcomed. If received within one month of the issue of this list they will be taken into consideration before the publication of the standard, otherwise they may have to await revision.

CM 2437	Sampling of ferrous metals and metallurgical materials for analysis. Part 1—Iron and steel
CM 2701	Workroom stands
CM 2724	Electrical protective relays (revision B.S. 142)
CM 2990	Conduit dies
CM 3486	Section 1, General clauses applicable to all types of meter (revision B.S. 37)
CM 3487	Section 2, Single-phase, 2 wire whole-current credit type meters (revision B.S. 37)
CM 3501	Thermo-dynamic properties of refrigerants
CM 3566	Cable sealing boxes for oil immersed transformers
CM 3674	Code of practice for street lighting
CM 3837	Graduated beakers for injectable fluids in hospitals
CM 3857	Recommended common names for pest control products
CM 3859	Ignition cables for vehicles
CM 3863	The power rating of valve-driven high-frequency induction heating equipment
CM 3898	Protective clothing for welders
CM 3901	High-tension and low-tension batteries for valve-type hearing aids (revision B.S. 966)
CM 3910	Proposed composition for filler rods for inclusion in British Standard for bronze welding
CM 4084	Single-sized aggregate for roadstone and chippings (revision B.S. 63)
CM 4087	Steel wire for aircraft bolts and nuts
CM 4093	Laminated synthetic resin bonded moulding and machined parts (high strength paper reinforced) for aircraft purposes
CM 4129	Parallel dowel pins (steel)
CM 4132	Protective toe-caps for safety boots (revision B.S. 953)
CM 4134	Method for the determination of small amounts of silicon in plain and low alloy steels and irons (absorptiometric method)
CM 4135	Method for the determination of tin in high alloyed steels (including high speed steels)

CM 4184	Methods of testing raw rubber and unvulcanized compounded rubber. Part 2, Methods of physical testing
CM 4187	Domestic pressure cookers
CM 4190	Nominal diameters for tins other than processed food tins
CM 4193	Rubber ward dressing gloves and porters' gloves for hospital use
CM 4194	Rubber post mortem gloves
CM 4288	Rewinders and associated equipment
CM 4291	Pressure gauges
CM 4295	Dummy sparking plugs and blanking caps and washers for aircraft purposes
CM 4375	Minimum safety requirements for children's wooden cots for domestic use
CM 4461	Rubber insulated lighting shaft and roadway cables in collieries

A copy of any of the above drafts can be obtained by subscribing members free of charge on application to the B.S.I. To non-members, price 2/– post free.

DRAFT CODES OF PRACTICE CIRCULATED FOR COMMENT

The following draft code has been circulated by the B.S.I. on behalf of the Council for Codes of Practice for Building (construction and engineering services) formed under the aegis of the Ministry of Works:

General series of Building Codes:

CP(B) 963 Sanitary appliances and their installations. Draft code 305. 3/–

B.S. 1500 PROVISIONAL BRITISH STANDARD CODE FOR FUSION-WELDED PRESSURE VESSELS

The above standard was issued in November, 1949 in provisional form so that an opportunity could be afforded to industry to submit their comments. It would be appreciated if anyone wishing to submit comments on this Code would send them in before October 31st, 1950.

NEW OVERSEA STANDARDS AVAILABLE IN THE B.S.I. LIBRARY

Available to members on loan (copies also available for sale on application to Sales and Distribution Department).

CANADA

Canadian Standards Association

B 79	List of standard sizes of cast iron radiators
W 55.1	Resistance welding equipment

Canadian Government Specifications Board

1–GP–33	Lacquer; pigmented, general purposes, interior
1–GP–55a	Paint; priming, exterior

INDIA

Indian Standards Institution

IS 199	Methods for the estimation of moisture, total size, starch, ash and wax content in grey and bleached cotton textile materials
IS 200	Method for determination of copper number of cotton textile materials
IS 201	Methods of analysis of and tolerances for water for textile purposes

NEW ZEALAND

NZSS 362	School paper stationery
NZSS 519	Milking machine rubberware
NZSS 623	Conditions of tender and general conditions of contract for civil engineering works
NZSS 625	Water taps (½ inch to 1 inch)
NZSS 671	Code of sanitary plumbing and drainage by-laws

SOUTH AFRICA

South African Bureau of Standards

SABS	
016	Methods of testing refractory materials
84	Solvent ether
99	White chalks
SV 101	Manually operated air-break switches
SV 102	Portable electric immersion heaters
SV 111	Replacement type heating units

UNITED STATES OF AMERICA

American Standards Association

ASA	
A 74.1	Structural clay load bearing wall tile (ASTM C34–49)
A 77.1	Structural clay floor tile (ASTM C57–49)
B 5.12	Twist drills (straight shank and taper shank)
B 5.25	Punch and die sets for two post punch-press tools
B 6.9	Design for fine-pitch worm gearing
B 16.18	Cast brass solder joint fittings
B 18.8	High strength high temperature internal wrenching bolts

UNITED STATES OF AMERICA—(*Contd*)

ASA

B 18.9	Plow bolts
B 27.2	Plain washers
C 60.4	Designation system for metal electron tube shells
C 80.1	Rigid steel conduit zinc coated
C 80.2	Rigid steel conduit—enameled
C 80.3	Electrical metallic tubing zinc coated
C 82.2	Proposed American Standard methods of measurement of fluorescent lamp ballasts
C 82.3	Proposed American Standard for fluorescent lamp reference ballasts
Z 22.7	Location and size of picture aperture of 16-mm. motion picture cameras
Z 22.8	Location and size of picture aperture of 16-mm. motion picture projectors
Z 22.19	Location and size of picture aperture of 8-mm. motion picture cameras
Z 22.20	Location and size of picture aperture of 8-mm. motion picture projectors
Z 26.1	Safety code for safety glazing materials for glazing vehicles operating on land highways
Z 38.1.7	Standard dimensions for amateur roll film, backing paper, and film spools

Federal Specifications

OO–L–131d	Laundry equipment
QQ–M–55	Magnesium alloy, permanent and semi-permanent mold castings
TT–P–91a	Paint, rubber base, for concrete floors
TT–V–109	Varnish, spar, alkyd-resin
VV–C–846	Cutting oil, soluble

National Bureau of Standards

C 493	Development of the National Bureau of Standards casting resin

Society of Automotive Engineers

Aeronautical Materials Specifications

AMS

2212A	Tolerances, magnesium alloy sheet and plate
2241B	Tolerances, corrosion and heat resistant steel bars
2243B	Tolerances, corrosion and heat resistant steel tubing
2253C	Tolerances, carbon and alloy steel tubing
2261A	Tolerances, nickel and nickel-base alloy bars
2262A	Tolerances, nickel and nickel-base alloy sheet and strip
2480A	Phosphate treatment (paint base)
2640C	Magnetic particle inspection
2645A	Fluorescent penetrant inspection
2665A	Silver brazing
2666	Silver brazing—high temperature
2670A	Copper furnace brazing
3110C	Primer, zinc chromate
3270	Synthetic rubber sheet, cotton fabric reinforced. Weather resistant—chloroprene type
4180A	Aluminium wire, 2S–H18
4376	Magnesium alloy sheet and plate AZ31x (hard)

UNITED STATES OF AMERICA—(*Contd.*)

AMS	
4574A	Nickel-copper alloy tubing, brazed, corrosion resistant, 67Ni–30Cu, annealed
4730A	Nickel-copper alloy wire, corrosion resistant, 67Ni–30Cu, annealed
5350A	Steel castings, precision investment, corrosion resistant, 12.5Cr
5369A	Steel castings, sand, corrosion and heat resistant, 20Cr–9Ni–1.4Mo–1.4W–Cb–Ti
5376A	Alloy castings, precision investment, corrosion and heat resistant, Iron base–20Cr–20Ni–20Co–3Mo–2W–1Cb
5526B	Steel sheet and strip, corrosion and heat resistant, 20Cr–9Ni–1.4Mo–1.4W–Cb–Ti
5532B	Alloy sheet, corrosion and heat resistant, Iron base, 20Cr–20Ni–20Co–3Mo–2W–1Cb
5533A	Alloy sheet and strip, corrosion and heat resistant, Iron base, 20Cr–20Ni–20Co–4Mo–4W–4Cb
5534A	Alloy sheet and strip, corrosion and heat resistant, Cobalt base, 20Cr–20Ni–4Mo–4W–4Cb
5540D	Alloy sheet and strip, corrosion and heat resistant, Nickel base, 15.5Cr–8Fe
5542B	Alloy sheet, corrosion and heat resistant, Nickel base, 15Cr–7Fe–2.5Ti–1Cb–0.7Al
5570F	Steel tubing, seamless, corrosion and heat resistant, 18Cr–11Ni–Ti (SAE 30321)
5610D	Steel, corrosion and moderate heat resistant, 13Cr–low carbon (SAE 51416F), free machining
5620A	Steel, corrosion and moderate heat resistant, 13Cr (0.30–0.40 C.) (SAE 51420F), free machining
5624A	Steel, high expansion, 12.5Ni–4.5Mn–4.0Cr (0.50–0.60 C.)
5667B	Alloy, corrosion and heat resistant, nickel base, 15Cr–7Fe–2.5Ti–1Cb–0.7Al
5668B	Alloy, corrosion and heat resistant, Nickel base, 15Cr–7Fe–2.5Ti–1Cb–0.7Al, solution and precipitation heat treated
5721A	Steel, corrosion and heat resistant, 20Cr–9Ni–1.4Mo–1.4W–Cb–Ti
5722A	Steel, corrosion and heat resistant, 20Cr–9Ni–1.4Mo–1.4W–Cb–Ti
5765A	Alloy, corrosion and heat resistant, Cobalt base, 20Cr–20Ni–4Mo–4W–4Cb
5770A	Alloy, corrosion and heat resistant, Iron base, 20Cr–20Ni–20Co–4W–4Mo–4Cb, solution and precipitation treated
5788	Coating alloy, Cobalt base, 28Cr–4.5W
6418	Steel, 1.8Ni–1.5Si–1.3Mn–0.4Mo (0.23–0.28 C.)
7210B	Cotter pins, corrosion resistant steel
7476	Bolts and screws, steel, corrosion and heat resistant, roll threaded

BELGIUM

Institut Belge de Normalisation

NBN	
25	Insulating compound for filling cable boxes, for heavy current up to 15,000 V.
45	Rules for metal conduit and couplers for electric lines
117	Iron and steel—methods of test
162	Electric hot-plates
173	Electric iron and heater elements for electric irons

BELGIUM—(*Contd.*)

NBN

197 Standard methods of protection for electrical machines, transformers and appliances
201 Fixed capacitors with industrial frequency
206 Radio receivers
210 Timber—measurement of logs
213 Electric resistance welding, brazing, riveting or heating machines
219 Timber—measurement of converted timber

CZECHOSLOVAKIA

Elektrotechnicky Svaz Ceskoslovensky

CSN/ESC 82 Power cables

EIRE

Institute for Industrial Research and Standards

IS 26 Woollen blankets

FRANCE

Association Française de Normalisation

A 06–552 Chemical analysis of lead up to 98.5 per cent pure
A 06–691 Chemical analysis of tin-lead base antifriction alloys
A 35–008 Hot rolled steel bars for concrete reinforcement (plain or grooved, with proof stress 40 kg/sq. mm. or over
A 45–041 Hot rolled steel bulb flats
Hot rolled iron and steel products:
A 45–550 Rails for barrels
A 45–552 End hoops (sloping section) for barrels
A 45–553 End hoops (right angled) for barrels
A 45–554 End hoops (curved section) for barrels
A 45–555 Curved rails for barrels
A 45–556 Socketted end hoops for barrels
B 31–015 Glass—bottle neck ring for stopper with metal fitting
F 13–005 Railways—connecting plug for electric heating, with rated voltage up to 3,000 V.
F 13–006 Railways—unconnected socket for connecting plug for electric heating, with rated voltage up to 3,000 V.
F 14–005 Railways—removable indicator plates for locomotives and rolling stock
F 20–028 Railway material—joints for buffers
F 51–001 Railway track—sleeper bolts
J 35–545 Shipbuilding—angle bracket for corner washbasin, slotted
J 35–546 Shipbuilding—angle bracket for corner washbasin, unslotted
P 41–205 Plumbing—water supply. Nomograph for the calculation of water pipes
U 82–101 Wooden frames for Dadant-Blatt beehives
V 20–001 Dessert pears
V 20–002 Dessert apples
V 21–002 Apricots
V 21–003 Plums
V 22–001 Tomatoes

ISRAEL

S.I. 29 Totally enclosed electric boiling plates for domestic purposes

ITALY

Comitato Elettrotecnico Italiano

Standard	7–5	Bare metallic alloy conductors for resistors
	11–8	Earthing installations
	11–9	Mobile electrical plant for agricultural purposes and shipbuilding yards
	12–2	Protection of radio receivers against radio interference caused by electrical installations
	15–4	Ebonite

POLAND

Polski Komitet Normalizacyjny

PN	
B 166	Joinery—technical conditions for production and acceptance
B 201	Portland cement, No. 250
B 206	Portland cement, No. 400
B 209	Cement for masonry, No. 150
B 520	Hearthstones
B 1601	Wooden windows for dwelling houses
B 1616	Double windows—structural details for 38 mm. frames
B 1617	Double windows—structural details for 45 mm. frames
B 1621	Polish type double windows—structural details for 38 mm. frame
B 1626	Swedish type windows—structural details
B 54670	Plane irons
B 54673	Plane irons for smoothing planes
B 54677	Plane irons for grooving planes
B 96000	Timber conversion—Redwood
B 96002	Timber conversion—European oak
C 96022	Extraction gasoline
E 37	D.C. traction motors
E 105	Electric cable
E 106	Textile-sheathed, rubber insulated aluminium cable
G 53051	Weather stations, plank-built
G 53052	Weather stations, reinforced plank-built
G 70005	Surveying—suspension of polygon point
H 83110	Merchant quality iron castings—chemical composition
H 92321	Cold rolled steel strip
H 74324	Round rolled-in flanges, flat facing
H 74325/7	Round rolled in flanges with collar
H 74328	Oval rolled in flanges with collar
H 74333	Soldered or welded flat facing oval flanges
H 74336 & 74342	Welded oval flanges with collar
I 59008	Small mortar tubs
I 59009	Bricklayer's chisels
I 59010	Bricklayer's rule
I 61003	Paint brushes—lining brush
I 61001	Short hand brushes

PN	
I 61004	Plasterer's joint rule (wooden)
I 61005	Dusting brushes
I 61008	Typewriter brushes
I 61019	'S' shaped scrubbing brushes
I 61020	Scrubbing brush with hole for handle
I 61021	Sweeping brush with hole for handle
I 61022	Hand sweeping brushes
I 61029	Painter's graining comb
I 61041	Painter's bucket
M 53107	Surface testing block sets
M 58960	Shell end mills
M 59020	Morse taper shank taper reamer
M 60202	Drill chucks
M 60203	Two-jaw drill chucks
M 61051	Jig clamp straps, fork types
M 61052	Jig clamp straps, bent type
M 61053	Jig clamp straps, straight type
M 62612	Die-stocks for pipe thread, adjustable type
M 62613	Die-stocks for pipe thread, spherical type
M 63483	Centre punches
M 77006	Aluminium saucepans, shallow
M 77010	Aluminium saucepan lids
M 77012	Aluminium frying pans
M 77015	Aluminium steamers
M 77016	Aluminium water ladles
M 77183	Aluminium skimmers, shallow
M 77206	Heavy enamelled bellied pots, medium
M 77210	Heavy enamelled frying pans
M 79000	Preserve tins—technical requirements
M 79001	Preserved meat tins, round
M 79003	Pickled cucumber tins, round
M 79006	Preserved fish tins, round
N 61000	Paint brushes—hair fitches
N 61001	Paint brushes—artist's hair fitches
O 54004	Shoemaker's heel burnisher
O 54007	Handle for shoemaker's heel burnisher
O 54010	Shoemaker's double burnisher
O 54012	Shoemaker's edge burnisher
O 54500	Furrier's knives
O 54501	Frame for furrier's knife
O 54502	Furrier's comb
O 54503	Furrier's pincers
O 55501	Saddler's knives, straight
O 55502	Saddler's knives, round
O 55504	Saddler's flat-nosed pliers
O 55505	Saddler's awls
O 55506	Saddler's needles, straight
P 02001	Paper sizes

ROUMANIA

Comisiunea de Standardizare

STAS	
96	Tin-lead alloys for soldering
128	Refractory products—compressive strength at high temperatures
130	Refractory products—classification
165	Mechanical tests of metals—determination of Brinell hardness
204	Brass for brazing
287	Cotton yarn
311	Petroleum products—white products, bromine value
321	Cotton goods—Gradel (bleached and mercerized cotton)
322	Cotton goods—unbleached and bleached linen
374	Lathe tools with special steel tips—facing tool
388	Portland cement
438	Hot rolled steel—round steel bars for concrete reinforcement
441	Seamless steel pipes—ordinary pipes for water and gas
455	Screw-plug fuses up to 200 A. and 500 V.—parts
457	Ordinary bricks
462	Wooden windows with shutters—for rural type houses
471, 474, 481/3	Malleable cast iron pipe fittings
500	Ordinary hot-worked carbon steel
505	Hot-rolled ordinary carbon steel—thick sheets and flat bars
507	Seamless steel pipes—ordinary pipes for building purposes, type 00
528	Seamless steel pipes—ordinary cold drawn pipes
537	Oilfield equipment—Duplex belt drive mud pumps, type T_1
541/2	Copper wire for coils
557	Oilfield equipment—duplex intermediate pumps, type I_2
562	Ordinary solidified grease
577	Milling cutters—basic principles and definitions
579	Milling cutters—shell end mills and face cutters
580	Milling cutters—slotting cutters
585	Morse tapers—shanks and spindle noses
586	Metric tapers—shanks and spindle noses
587	Cup-tools for rivets
616	Vegetable tanned leather belting
620	Cotton goods—bed ticking
622	Cotton goods—duck
624	Cotton goods—fine cottons
629	Bitumenized board with filled bitumen facing, type MC and MT
639	Compressed-air-driven tools—riveting tool
640	Compressed-air-driven tools—rotary drill
641	Compressed-air-driven tools—grinders
647	Zinc concentrate
652	Test of efficacy of fireproofing substances for timber
654	Shims for I A R 22 tractor motors
658	Workmen's hatchets
659	Flexible stays for locomotive fireboxes
660	Agricultural tools—hammer and anvil (amboss) for scythes
675	High tension overhead line—eye-clamps for suspension fittings
676	High tension overhead line—yokes for suspension fittings

ROUMANIA—(*Contd.*)

STAS
692 Oilfield equipment—wedge gate valves for high pressure
693 Oilfield equipment—wedge gate valves for square rod
695 Firefighting equipment—underground hydrant
706 Firefighting equipment—special spanner for couplings
901 Hot rolled fine steel sheets for engineering construction
904 Butyl acetate
905 Oak barrels
922 Black nuts—hexagon nuts with metric thread
926 Black nuts—square nuts with metric thread

URUGUAY

Instituto Uruguayo de Normas Tecnicas
UNIT
Provisional standards:
69 Standard for fixing limits of tolerances
72 Determination of fines in aggregates
70 Dimensioning of drawings

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AUSTRALIA
Doc 153 Design, construction, maintenance and inspection of mine shaft detaching hooks
Doc 154 1.5 per cent manganese steel for colliery hub drawbars, shackles, couplings and mine shaft detaching hooks

INDIA
EDC 5 (78) Hard drawn copper solid and stranded circular conductors for overhead power transmission purposes
EDC 5 (79) Hard drawn aluminium and steel cored aluminium conductors for overhead power transmission purposes
EDC 15 (66) Padlocks
EDC 24 (76) Manganese ore—battery grade
EDC 24 (77) Manganese ore—metallurgical grade

NEW ZEALAND
D 2605 Canvas and rubber shoes
D 2825 Code of General Building Bye-laws—signs and hoardings
D 3002 Ready mixed paint for priming coats for woodwork (excluding totara)
D 3005 Immersion heaters for thermal storage electric water heaters

SOUTH AFRICA

SABS

152 Manually operated enclosed type air break switches and isolators
155 Miniature circuit breakers for lighting, heating and domestic installations
156 Miniature circuit breakers for protection of electric motors
157 Domestic electric toasters
158 Electric kettles, jugs and saucepans
159 Domestic electric irons
160 Electric air heaters
161 Porcelain insulators
205 Glue gelatine
B.S. 15/7/4 Bituminous road binders
B.S. 15/15/19 Hearing aids
B.S. 15/10/22 Gypsum plasterboard
B.S. 15/22/18 Corrugated fibreboard boxes for the storage and transportation of blasting cartridges

UNITED STATES OF AMERICA

National Bureau of Standards

TS 4939 Brass trim for water closet bowls, tanks and urinals
TS 4968 140–F drycleaning solvent
TS 4985 Cotton flour bag (sack) towels
TS 4988 Vertical turbine pumps (export classification)

AUSTRIA

Önorm

B 2219 Code of practice for building—roof tiling
B 4102 Wooden structures—street bridges
M 5137 Wing screws
M 5139 Knurled head screws
M 5030 Welding electrodes—without nut—with hexagon nut (Metric thread M 6 to M 48)

PORTUGAL

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I 19 Envelopes
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NEW WORK STARTED IN OVERSEA COUNTRIES

AUSTRALIA

Wood technology
Colour and nomenclature (paints)

INDIA

Hard-drawn aluminium and steel-cored aluminium conductors for overhead power transmission
Hard-drawn copper solid and stranded circular conductors for overhead transmission

NEW ZEALAND

Ready-mixed paint for priming coats
Canvas and rubber shoes
Immersion heaters for thermal storage electric water heaters

SOUTH AFRICA

Lime
Mineral waters
Automotive pistons
Sugar confectionery
Mastic asphalt for roofing
Lubricating greases
Screwed steel conduit and fittings
Antimonial lead alloys
Testing borehole water yields
Sanitary requirements for food processing and food storage establishments

Printed in England by Gaylard & Son, London, S.E.14

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NEW ZEALAND

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D 3005	Immersion heaters for thermal storage electric water heaters

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SABS

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159 Domestic electric irons
160 Electric air heaters
161 Porcelain insulators
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B.S. 15/15/19 Hearing aids
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Wood technology
Colour and nomenclature (paints)

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SIXTH ANNUAL REPORT OF THE COUNCIL FOR THE YEAR ENDING 31st MARCH, 1950

THE number of slips written and locations recorded during the year, and the total up to 31st March, 1950, were approximately as follows :—

	1949–50	Total to 31st March, 1950
Main entries	8,313	137,198
References	7,507	100,302
	15,820	237,500
Locations	16,443	226,788

Work on the office file of entries was carried an important stage forward by the incorporation of all appropriate material in the weekly lists of accessions to the Science Library up to October, 1949. (These lists are still coming in for check.) With the completion of the check of the British Museum catalogue (except for recent additions and a few minor national headings), the office file should now provide the standard forms for most of the entries likely to be required. Many additional entries of locally published material may, of course, be expected to come in as libraries report their holdings.

During the year, lists of holdings have been received from a number of libraries. Of these, the holdings of the following have been incorporated : the libraries of the Universities of Leicester, Nottingham and Swansea, and of Liverpool in part ; the Selly Oak Theological College ; and the Public Libraries of Dundee, Hampstead, Ipswich, Newport and Southport.

Field work has been completed at Cambridge University library and the bulk of the holdings incorporated. Field work is in progress at the National Library of Scotland, and all holdings notified have been incorporated. At the Bodleian, field work is in temporary abeyance, but some holdings have been notified and incorporated.

Towards the end of the year, the need for a revision of the list of libraries invited to co-operate became apparent, and this matter is under consideration.

The work of the office suffered a severe blow from the sudden and lamented death of the Editor, Dr. Alfred Loewenberg, in December, 1949. Dr. Loewenberg succeeded Mr. Besterman as Editor and Executive Officer in January, 1947, and rendered outstanding service in the building up of B.U.C.O.P., a task to which he brought great knowledge and tireless application.

The resignation of Mr. David E. Laskey, in May, 1949, and a subsequent minor staff change, was followed by the appointment of Dr. E.

Saenger as a cataloguer on 1st September, 1949. Miss M. E. Hammond, chief cataloguer, has given invaluable service throughout the year, and has been instrumental in maintaining the efficiency of the office following the death of Dr. Loewenberg.

During the summer months a representative of the Institute of Advanced Legal Studies was engaged in the office in the compilation of a union catalogue of law libraries. A copy of this has been received for incorporation.

BRITISH UNION CATALOGUE OF PERIODICALS

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH, 1950

Year to 31.3.49		£	s.	d.	£	s.	d.
	EXPENDITURE						
25	Administrative Expenses	25	0	0			
1,491	Salaries	1,303	11	10			
14	Printing and Stationery	11	19	6			
2	(Books)	—					
5	Postage	3	5	5			
6	Travelling Expenses	1	16	10			
3	Audit and Accountancy	3	3	0			
1	Sundry Expenses	3	2	2			
1,547					1,351	18	9
1,000	LESS GRANT FROM ROCKEFELLER FOUNDATION				1,000	0	0
547	DEFICIT FOR YEAR ENDED 31ST MARCH, 1950				351	18	9
973	ACCUMULATED SURPLUS brought forward at 1st April, 1949				425	12	6
547	*Less:* Deficit for year ended 31st March, 1950				351	18	9
426	ACCUMULATED SURPLUS at 31st March, 1950, carried forward				73	13	9
	Represented by—						
497	CASH at Bank	143	6	2			
2	,, in Hand	14	11	7			
499		157	17	9			
73	*Less:* Sundry Creditors	84	4	0			
426					73	13	9

We have examined the above Income and Expenditure Account with the Books and Records of the Association and Special Libraries and Information Bureaux and certify that it is correct and in accordance therewith.

(Signed) WEST & DRAKE,
Chartered Accountants.

Sardinia House,
52, Lincoln's Inn Fields,
London, W.C.2.

19 *April,* 1950.

Vol. 2, No. 3 ASLIB PROCEEDINGS August 1950

APPENDICES

Appendix I

The Second Interim Report of the Unesco/Library of Congress Bibliographical Planning Group by Kathrine Oliver Murra: Comments arising from the Meeting of Aslib's Members held on 2nd December, 1949

(1) Appreciation was expressed of the work which had gone into the compilation of the Second Interim Report, and for the provision of the raw material which made possible a discussion on the form of the proposed Working Paper for the 1950 International Bibliographical Conferences.

(2) Emphasis was laid on the fact that the Working Paper itself should be written in clear and simple phraseology. In particular, it was hoped that it might be possible to eliminate the phrase 'bibliographical control', since the word 'control' carried undesirable associations of ideas in certain countries. The meeting was unable to suggest an alternative other than 'documentation', which in itself was not very acceptable.

(3) It was suggested that the Working Paper should consist of:—

(*i*) An analysis of the problem.

(*ii*) An ideal solution (see Besterman's 'Attack at Various Levels and Stages'—*College and Research Libraries*, Vol. 9, No. 2, April, 1948).

(*iii*) An appendix to the solution showing:—

  (*a*) what now exists in the way of services;

  (*b*) what could be easily realizable in the near future.

  Note.—The Working Paper need not attempt to put forward final recommendations; decisions of this nature should be left to be made at the International Meetings and Conferences to be held in 1950.

(4) It was pointed out that the frame of reference for the Working Paper given in section 2 of the Report made too arbitrary a division between national and international bibliographical controls. Some of the minimum national bibliographical controls given on page 11 might be more suitably tackled on an international and subject basis, e.g. sections 2.1.2.14 and 2.1.2.16. These link up with the suggestion for the annual reviews (3.5.5), the usefulness of which was greatly emphasized.

(5) In making an analysis of the problem consideration should be given to the requirements in different subject fields since the development of bibliographical tools has differed, for instance, in Pure and Applied Sciences, the Social Sciences and the Humanities.

(6) It was pointed out that, of the conclusions listed on page 28, research into the use of material (5.1.1) and into the use of bibliographical services (5.1.2), represented such an enormous field that nothing useful

could be expected to be achieved before the meetings in 1950. While it was agreed that work on such aspects of the problem could usefully be started as soon as possible, it was agreed that the most urgent subject would be research into aspects of complete national bibliography (5.1.5). It should be possible to obtain really useful factual data in connection with this for use at the 1950 meetings.

(7) The meeting hesitated to recommend the setting up of the two additional Unesco Committees suggested on pages 31/32. It was thought that the 1950 Conferences might suggest the development of the F.I.D. and/or I.F.L.A. to undertake the functions of the proposed Unesco International Committees.

(8) With regard to the three questions posed on page 1, No. 1 has been dealt with above; the Meeting found it impossible to make any recommendations with regard to No. 2 (the term 'within your lifetime' was too vague to give a basis for discussion); in connection with question 3, it was pointed out that the following sources of information were not cited under the heading of Tools (3.1.1), though it is possible that they have been consulted though not mentioned by name.

The Survey of Documentation in the *Journal of Documentation.*
Bibliographia in *The Review of Documentation* (F.I.D.).
Chronique Bibliographique de l'A.B.D. in *Les Cahiers de la Documentation* (Association Belge de Documentation).
Umschau—Livres et Revues in *Nouvelles ABS and ASD* (Association des Bibliothécaires Suisses).

APPENDIX II

DOCUMENTATION OF COLONIAL MATERIAL

In the course of the discussion at the Aslib meeting, held on 2nd December, 1949, Mr. H. G. A. Hughes, of the School of Oriental and African Studies, University of London, put forward the following views regarding a field of studies so far undocumented :—

> Discussion has so far been confined to looking at the problem of bibliographical control solely in terms of the British Isles. Britain has a colonial empire of some forty colonial territories, at various levels of social and economic development.
>
> Colonial research and the promotion of social and economic advancement were seriously hampered by lack of bibliographic control over the colonial field. British library and documentation services had a responsibility in bettering this position.
>
> The particular needs (among many) calling for immediate attention were :—
>
> (1) Complete listing of colonial official publications.
> (2) Union lists of materials for colonial study and research available in Great Britain, particularly of holdings of periodicals published in colonial territories.
> (3) Select retrospective bibliographies *by region* for areas without existing bibliographies of this type, e.g. Nigeria.

(4) Further provision of abstracting journals, dealing with one area, summarizing the important materials for that area in all fields of knowledge. Good example was *African Abstracts*, published by the International African Institute, with the aid of an Unesco subsidy. There was need for such an abstract journal for the Pacific area and for the Caribbean.

(5) Probably the most urgent task was the stimulation of rapid decentralization of documentation to each colonial territory. This might be possible in some areas through the new University Colleges, e.g. Gold Coast, Nigeria, West Indies.

Appendix III

Unesco/Library of Congress Bibliographical Survey

Summary of events to June, 1950

The following notes are added for the convenience of readers :—

(1) The document printed as Appendix I was reported at a meeting of the British National Co-operating Body for Libraries (Unesco U.K. Commission), held on 6th December, 1949. It was then agreed that the Library Association should act as a co-ordinating body by collecting the views of British organizations on the Unesco/Library of Congress reports and should in due course draft them into a comprehensive statement for submission to Unesco. In the meantime individual reports from particular bodies could be sent directly to Unesco for information, without prejudice to the final British report. A copy of the Aslib comments was therefore sent to Mr. Edward J. Carter, Head of the Libraries Division of Unesco, and another to Dr. Luther Evans, of the Library of Congress.

(2) In March, 1950, a report 'prepared as a working paper for an international conference on bibliography' was circulated by the Unesco/Library of Congress Survey as a printed document under the title, *Bibliographical services : their present state and possibilities of improvement* (67 pp.). This was followed by an Appendix, *Notes on the development of the concept of current complete national bibliography*, by Kathrine Oliver Murra (42 pp.).

(3) At about the same period it was announced that the Congress, which the International Federation of Library Associations had hoped to organize in Washington in October, 1950, could not take place. Unesco, therefore, proposed to convene a special small-scale conference in Paris in November, 1950, to enable work on world bibliographical problems to continue. Unesco expressed the hope that national discussion of these problems, in many cases already started in anticipation of the international conference, would be continued.

(4) At the end of March, 1950, Aslib set up a working party, under the Chairmanship of Miss Barbara Kyle, to consider those parts of the

Unesco/Library of Congress Bibliographical Survey which dealt with the social sciences.

(5) A meeting of representatives of British organizations interested in bibliographical planning has been convened by the Library Association for 12th July, 1950. A report embodying British views will then be drawn up for submission to Unesco.

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TWENTY-FIFTH ANNUAL CONFERENCE, 1950

CONTENTS

PAGE

INTRODUCTION 169

CONFERENCE AND MEETINGS COMMITTEE 171

LIST OF DELEGATES 173

Saturday, 23rd September

THE FUTURE OF ASLIB.
Leslie Wilson, M.A., F.R.E.S. (The Director, Aslib) 179
Chairman: Percy Dunsheath, C.B.E., M.A., D.SC., M.I.E.E.

THE LIBRARY RESOURCES OF BRISTOL AND THE SOUTH-WEST.
F. L. Kent, M.A. (Librarian, University of Bristol) 187
Chairman: James Ross, M.A., F.R.S.L., F.L.A.

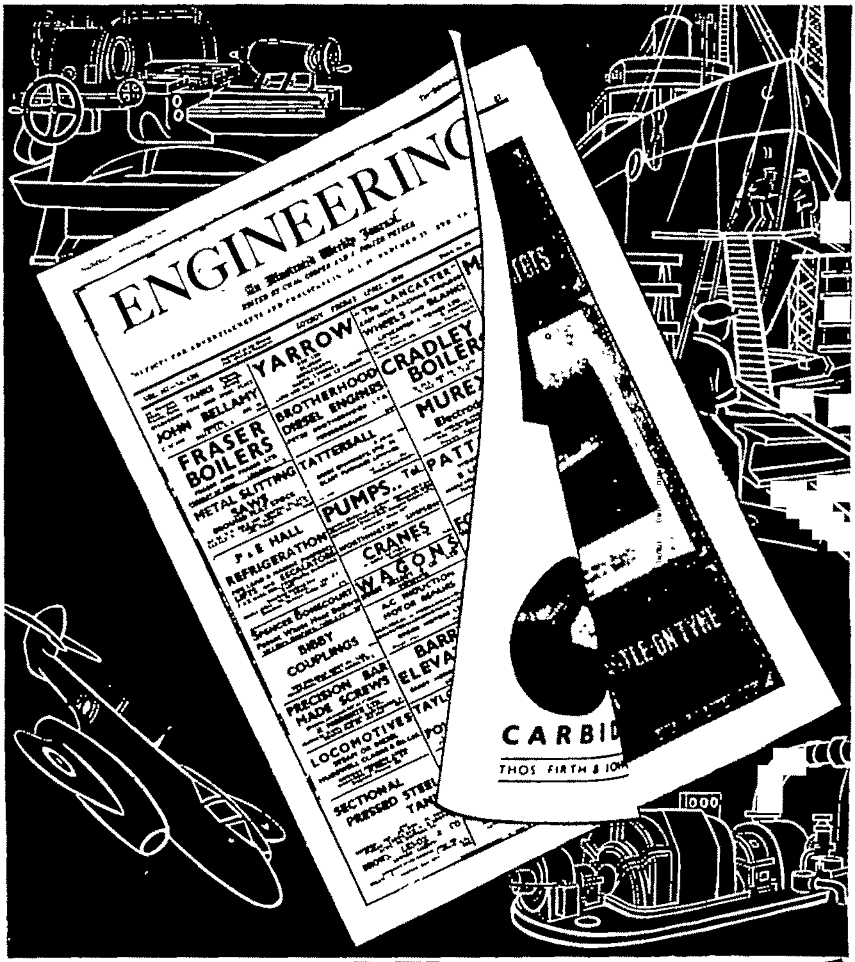
Sunday, 24th September

REPLANNING OF LIBRARIES.
Miss M. Exley, F.L.A. (Chief Research Librarian, Boots Pure Drug Company, Ltd.) 195

REORGANIZATION OF LIBRARIES.
W. Ashworth, B.SC., F.L.A., A.R.P.S. (Librarian, British Nylon Spinners, Ltd.) 201
Chairman: J. P. Lamb, F.L.A.

THE LITERATURE OF SPECIAL LIBRARIANSHIP.
Miss E. M. R. Ditmas, M.A. (Aslib) 217
Chairman: Roy Stokes, F.L.A.

EXPERIENCES AT THE EARL OF LEICESTER'S LIBRARY AT HOLKHAM.
W. O. Hassall, M.A., D.PHIL., F.S.A. (Assistant Librarian, Bodleian Library) 245
Chairman: David Douglas, M.A., F.B.A.



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The Extensions will appear semi-annually, viz. on the 1st of January and on the 1st of July. After the edition of the second " Erganzungsband " to the 3rd (German) complete edition of the Universal Decimal Classification which will appear early in 1951, the Extensions will contain all future accepted PE Notes in a cumulative form.

The Extensions have the added advantage of labour saving and compactness. The usual cutting and rearranging of PE Notes will be superfluous.

The annual subscription to the Extensions will be 25 Dutch guilders for those who start their subscription in 1951. Prospective subscribers in 1952 or later will have to pay a higher subscription rate.

Orders should be sent to the

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ASLIB PROCEEDINGS

Volume 2 November, 1950 Number 4

INTRODUCTION

THE papers in this issue were given at the 25th Annual Conference, held at Bristol University from 22nd to 25th September, 1950. Some 230 delegates from the British Isles, the Commonwealth and Europe were welcomed to dinner on Friday evening by Sir Philip Morris, C.B.E., M.A., Vice-Chancellor of the University, and Lady Morris. No papers were given on Friday evening, Mr. J. E. Wright arranging an informal dance after dinner.

Formal business began on Saturday morning with an introduction by the President, Dr. Percy Dunsheath, to Mr. Wilson's first address to an Aslib Conference. Dr. Dunsheath outlined the present strong position of Aslib. Since the war membership had trebled, and an efficient and enthusiastic staff was working in handsome new quarters with equipment much of which was purchased from a special capital grant from the Treasury administered by the Department of Scientific and Industrial Research. The balance of this grant was available for the prosecution of schemes proposed by the Council last May. The Government, Dr. Dunsheath said, fully appreciated the investment value of libraries furthering the progress of science and specialized knowledge. After the papers by Mr. Wilson and Mr. Kent, parties visited the following libraries :—

1. The Bristol Aeroplane Company.
2. The National Smelting Company, Limited.
3. City Library : General
   South-West Regional System.
4. University Library : General
   Medical
   Engineering
   Zoology.

In the evening a theatre party was made up to see Christopher Fry's *The Lady's Not for Burning* at the oldest theatre in England—The Bristol Theatre Royal.

Sunday was given over to papers by Miss Exley, Mr. Ashworth, Miss Ditmas, and Dr. Hassall, and an exhibition of library literature arranged to supplement Miss Ditmas's paper, whose select list served as a catalogue to the exhibition. Considerable interest was aroused by the prototype of a microcard reader which was shown by the courtesy of Mr. E. H. Clark, Administrative Officer in the U.K. of the Australian National University. The instrument, which is the only microcard reader so far produced in a non-dollar area, was designed by Mr. E. N. Waterworth, of Hobart, Tasmania. Mr. Clark has kindly agreed to receive enquiries about this reader at his office at 27, Russell Square, W.C.1.

The papers are given here in chronological order of their presentation.

Dates of the sessions will be found in the Contents list; discussions follow the session papers in the text. As Miss Exley and Mr. Ashworth gave their papers at the same session, the discussion on both papers follows Mr. Ashworth's. Neither Mr. Kent's nor Dr. Hassall's paper called for discussion, but suggestions made to Mr. Kent have been combined with other material and added to the end of his paper.

CONFERENCE AND MEETINGS COMMITTEE

KYLE, MISS B. R. F. (*Chairman*), Royal Institute of International Affairs.

LANCASTER-JONES, MRS. E. J., B.Sc. (*Vice-Chairman*), British Council, Combined Science Library.

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KENT, F. L., M.A., University of Bristol.

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Gauntlett, Miss M. D., B.Sc.	Kodak, Ltd., Research Library
George, Miss V. F., B.Sc.(Econ.)	International Wool Secretariat
Gisburn, Miss M. L., A.L.A.	Imperial Chemical Industries, Ltd., Paints Division
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Hancocks, B. P., F.L.A.	Coventry City Libraries
Hanson, C. W., B.Sc.	British Scientific Instrument Research Association
Harrison, Miss S. M., B.Sc.	Hosiery & Allied Trades Research Association

Harte, Miss M., B.Sc.	Monsanto Chemicals, Ltd., Ruabon
Hassall, W. O., M.A., D.Phil., F.S.A.	Bodleian Library
Hassall, Mrs. W. O.	
Hastings, Miss M., B.A., A.L.A.	Railway Executive (London Midland Region), Scientific Research Dept., Derby
Heath, G. R.	Sutcliffe, Speakman & Co., Ltd.
Henderson, Miss I. J., M.Sc.	National Smelting Co., Ltd.
Henderson, Miss M. I., M.A.	University College Library, Southampton
Herron, F. R., F.L.A.	Bowater's Paper Corporation, Ltd.
Heumann, Miss R. E., B.A., A.K.C., A.L.A.	Medical Research Council
Hewetson, C. E. C.	Individual Member
Hickman, F., F.R.S.A., A.L.A.	Ministry of Fuel and Power Library
Hill, R. H., M.A., F.L.A.	National Central Library
Hillier, J. R.	Imperial War Museum
Hinchliff, Miss I., M.A., Dip.Lib.	United Dairies, Central Laboratory
Hirst, F. C., F.L.A.	Ministry of Agriculture and Fisheries Library
Horsell, Miss A., B.A.	Rotol, Ltd.
Hyams, H., F.Inst.Pet.	Shell Petroleum Co., Ltd., S.T.A. Department
Jacobs, Miss Ruth, B.A., B.S.	Department of Scientific and Industrial Research
Janson, O. S.	S. Smith & Sons (Eng.), Ltd.
Johnson, H. H., W.Ex., M.I.Mech.E., M.I.E.E.	*Engineering*
Johnson, Miss N. H., B.Sc.	Water Pollution Research Laboratory
Jones, Alderman Miss M. L. Kingsmill, C.B.E., M.A., J.P.	Manchester Public Libraries
Jones, D. C. Henrik	The Library Association
Kees, S. J., F.L.A.	Individual Member
Kendall, O. D., M.A.	University of Bristol, Warden, (Wills Hall)
Kendall, Mrs. O. D.	
Kent, F. L., M.A.	University of Bristol
Kent, Mrs. F. L.	
Klaar, Miss R. M., Dr. rer. pol.(Vind.)	Manchester Oil Refinery, London
Knight, Miss D., B.A., Dip.Lib., F.L.A.	National Institute for Research in Dairying
Laing, Miss E. M.	British Baking Industries Research Association
Lamb, J. P., M.A., F.L.A.	Sheffield City Libraries
Lamb, Mrs. J. P.	
Lancaster-Jones, Mrs. E. J., B.Sc.	British Council, Combined Science Library
Lewis, Mrs. P. I., F.L.A.	Austin Motor Co., Ltd.
Lilley, Miss J. F. O., B.A.	Institute of Transport
Lingard, A. L., M.A., A.F.R.Ae.S.	Ministry of Supply, TPA3/TIB
Linstead, C. C.	Edgar Allen & Co., Ltd.
Lockie, Miss G. E., B.Sc.	Ilford, Ltd.
Lothian, Miss A., Ph.C., A.L.A.	Pharmaceutical Society of Great Britain
Lowenthal, E. G., Dr. rer. pol.	
Lowenthal, Mrs. I. R.	Wiener Library
MacKenna, R. O., M.A., A.L.A.	King's College Library, Newcastle-on-Tyne
Mansfield, A. J.	National Institute of Agricultural Engineering
Marshall, G. C., B.Sc., A.M.I.Chem.E.	W. C. Holmes & Co., Ltd.
McClennan, A. W., A.L.A.	Borough of Tottenham, Libraries and Museum
McDonald, A. L. G., B.A.	Australian National University, Canberra
Mair, J.	H. K. Lewis & Co.
Mann, A. C.	British Council, Books Dept.
Marks, Miss J.	Office of the High Commissioner for India
Marsland, Mrs. E. M.	Manchester Oil Refinery Library, Manchester
Mason, D., A.L.A.	Boots Pure Drug Co., Ltd.
Mastenbroek, J. G.	British Insulated Callenders Cables, Ltd., Research Dept.
Maycock, S. P., A.R.I.B.A.	Ministry of Works, Bristol

Morris, Sir Philip, C.B.E., M.A.	University of Bristol
Morris, Lady	
Neagle, Miss V. E. G. M.	Shell Petroleum Co., Ltd., Trade Relations Dept.
Neal, Mrs. G. M. B., B.Sc., D.I.C., A.F.R.Ae.S.	*Engineering*
Neuberger, Miss S. R., B.A.(Cantab.)	General Electric Co., Ltd., Research Laboratories
Newton, Miss B. D., B.Sc.	Imperial Chemical Industries, Ltd., Head Office
Norton, Mrs. E., B.Sc.	British Electrical & Allied Industries Research Association
Norton, John	
Oldfield, S. G.	Fisons, Ltd.
Oliver, Miss R.	British Electrical Development Association
Overton, H., B.Sc.	W. D. & H. O. Wills (Branch of the Imperial Tobacco Co., Ltd.)
Parrish, J., B.Sc.(Tech.), A.R.I.C., F.Inst.Pet.	Shell Petroleum Co., Ltd., S.T.A. Department
Pearce, Miss M. J., B.A.	Shell Petroleum Co., Ltd., Chemical Industry Management, Commercial Division
Pears, J. B., M.A.(Cantab.), A.I.Mech.E.	Imperial Chemical Industries, Ltd., Head Office Intelligence Dept.
Pearson, J. D.	School of Oriental and African Studies
Pearson, W., A.L.A.	Ministry of Town and Country Planning Library
Pemberton, Mrs. H.	General Electric Co., Ltd., Research Laboratories
Pennock, Miss E. C. M., A.L.A.	Shell Petroleum Co., Ltd., Publicity Department
Perry, F. C.	The Grammar School, Bristol
Pottinger, M. C., D.S.C., F.L.A.	Scottish Central Library
Potton, Miss H. A.	North Thames Gas Board
Powell, Miss J. C.	Shell Petroleum Co., Ltd., S.T.A. Department
Prior, A. G., B.A.	National Union of Teachers
Pyman, Miss E. E.	Hendon Public Libraries, Central Library
Raine, A. H., B.Sc.	Brotherton & Co., Ltd
Rastorgoueff, V. L., B.Sc.(Eng.), A.M.I.E.E.	Standard Telephones & Cables, Ltd.
Raymer, Miss M. M., B.A., F.L.A.	Royal College of Veterinary Surgeons
Reed, J. B., B.Sc., A.R.I.C.	The British Coal Utilization Research Association
Reid, Miss N., B.Sc.	Society of the Chemical Industry
Ridgewell, P.	Mullard Radio Valve Co., Ltd.
Ridler, Miss E. H., B.A	Ministry of Supply, TPA3/TIB
Ross, J., M.A., F.R.S.L., F.L.A.	Bristol Public Libraries, Central Library
Ross, Mrs. J.	
Sabet, A A.	Fouad I National Research Council
Saunders, W. L., B.A , A.L.A.	University of Birmingham Institute of Education
Schultze, Rolf S., Dr.-Ing., A.R.P.S.	Kodak, Ltd., Research Library
Schafer, Miss B., B.Sc.	BX Plastics, Ltd.
Scott, K., A.L.A.	The Carborundum Co., Ltd.
Sewell, R.	The United Steel Companies, Ltd.
Shanks, Miss E. I., B.A.	Ministry of Works Library
Shaw, L. J., F.L.A.	Leyton Public Libraries, Central Library
Sharr, F. A., B.A., F.L.A.	Manchester Public Libraries, Central Library
Sheret, N. L. R., B.Sc., A.T.I.	Imperial Chemical Industries, Ltd., Plastics Division
Shires, G. A., M.Sc.	Dunlop Rubber Company, Ltd.
Shrigley, Miss I., M.A.	Institute of Bankers
Slonkova, Mrs. M., Ph.D.(Prague)	British Cotton Industry Research Association
Smith, Miss I. F.	Iliffe & Sons, Ltd.

LIST OF DELEGATES AND VISITORS

Smith, Miss B. L., B.Sc.	Shell Petroleum Co., Ltd., Chemical Industry Management, Process & Technical Division
Smith, J. R., F.L.A.	Sheffield City Libraries
Smyth, Miss E. S., B.A., F.L.A.	Agricultural Economics Research Institute, University of Oxford
Spence, Mrs. M., B.Sc.	Scottish Seaweed Research Association
Speyer, D. N., B.Sc.	Imperial Chemical Industries, Ltd., Plastics Division
Stewart, Miss S., B.Sc., A.L.A.	British Aluminium Co., Ltd.
Stokes, R., F.L.A.	Loughborough College of Librarianship
Tench, Miss M. P.	Ministry of Supply, Radio-chemical Centre
Thomerson, Miss L. G., B.Sc.	Printing, Packaging and Allied Trades Research Association
Thompson, A., M.A., F.L.A.	Royal Institute of British Architects
Thorne, R. G., B.Sc., A.F.R.Ae.S.	Royal Aircraft Establishment
Thornton, Miss H.	T.M.M. (Research), Ltd.
Turnbull, Miss A.	Aslib
Turnbull, Miss H. C. N., M.A.(Oxon.)	Department of Scientific and Industrial Research, Pest Infestation Laboratory
Turner, Miss G. M., B.Sc.	Science Museum Library
Urquhart, D. J., Ph.D.	Department of Scientific and Industrial Research
Uvarov, E. B., A.R.C.S., B.Sc., D.I.C., A.R.I.C.	Courtaulds, Ltd., Coventry
Vallender, Miss E., F.L.A.	Metropolitan-Vickers Electrical Co., Ltd.
Verhoef, M., Dr. Ir.	Nederlands Instituut Voor Documentatie en Registratuur (N.I.D.E.R.)
Vickery, B. C., M.A.	Imperial Chemical Industries, Ltd., Butterwick Research Laboratories
Voigt, G., D.Phil	Reckitt & Colman, Ltd., Hull
Wadsworth, Miss E., M.A.	Royal Astronomical Society
Walker, Miss A. T.	University of Bristol (for the Warden of Manor Hall)
Warren, Miss E. D.	Richard Thomas & Baldwins, Ltd.
Watkins, Miss K. E., B.Sc., F.L.A.	Science Museum Library
Watts, W. G., A.L.A.	Institution of Mining and Metallurgy and the Institution of Mining Engineers
Wells, A. J., F.L.A.	British National Bibliography, British Museum
Wilson, Leslie, M.A., F.R.E.S.	Director, Aslib
Wilson, Mrs. Leslie	
Woledge, G., B.A., A.L.A.	British Library of Political and Economic Science
Wood, A. C., M.A., A.L.A.	University College, Hull
Woods, Miss J.	Albright & Wilson, Ltd.
Wright, J. E.	The Library, Institution of Electrical Engineers
Wyatt, Miss M. I.	J. Lyons & Co., Ltd.
Yescombe, E. R., A.L.A.	Northern Polytechnic
Young, J. D., B.Sc.(Econ.)	Individual Member

THE FUTURE OF ASLIB

BY LESLIE WILSON, M.A.
Director of Aslib

IT must fall to few people to make the first public address of their lives not only in the distinguished company which does me the honour of its attendance this morning, but within the walls of such a revered house of learning as this noble university which is extending to us the generous hand of hospitality this week-end. Nor, Sir, if you will permit this modest and totally inadequate reference to yourself, can there be many who can, on such an occasion, have as their friend and supporter one who in a busy professional and public life has nevertheless found the time to contribute so generously and in such a worth-while and practical manner to the cause in which we all believe. I am, therefore, doubly gratified that I have been given this opportunity of, as it were, thinking aloud for a few minutes on this question of the future development of our great Association.

I should perhaps explain, Mr. President, that my audience has not, whether wittingly or unwittingly, trodden the hallowed path to Delphi; they have come to consult no oracle prepared to say in detail what the future of Aslib shall be. Rather have they come to listen to one who has perhaps had rather more time than most of us to give some thought to the broad courses he would like Aslib to follow. I speak in that sense as an amateur, but as one whose immediate future is to be dedicated to that task.

I suppose if you asked any hundred foreign visitors to these shores just what it is about England that is so different from any other country ninety-nine would probably reply that it is the contribution made by the voluntary organizations. Now we in this hall to-day all know the history of this great Association, and we know that it has developed on voluntary lines supported in the main by work from enthusiastic workers. Personally, I am glad that it should have been so, because to my mind it is the voluntary organizations which have contributed so much in the form of selfless service to our public life. On the other hand, we must remember this—that in the present century under present economic conditions it is no longer possible, and in my view no longer desirable, that voluntary effort should be left entirely to its own resources, and it is for that reason that I welcome the trend characteristic of the present age towards a great partnership between voluntary effort on the one hand and State interest and support on the other. That partnership has become an indispensable element of Aslib's life through the generous support which it now receives financially from His Majesty's Government, and I believe sincerely that the granting of that support is probably the greatest milestone in the whole of Aslib's very distinguished history. I see in it a guarantee that Aslib will be able to continue its work more energetically and more efficiently in the future and I welcome it wholeheartedly.

We must nevertheless acknowledge—I am sure we all do—that that support, particularly the acceptance of public funds, does, in fact, lay an obligation upon us, and I would like to speak on the nature of that obligation. You will remember that the partnership is between voluntary effort on the one hand, and the State on the other, and by the State I mean the whole national being. The obligation which that partnership places upon ourselves is that we should think primarily in terms not merely of professional ends but in terms of the much wider national need. By this I mean—and I say it in fear and trepidation in this assembly—that the important people from Aslib's point of view here and now, at this very moment, are not primarily those who are gathered in this room. We are already converted to an ideal. The important people, taking the long view, are those who are called upon to lead our national recovery, and on whose shoulders the direction of industry, in particular, towards ensuring that recovery rests. It is obvious that, at the present time, the national need is, as Sir Stafford Cripps has made perfectly clear on so many occasions—and no doubt to the great chagrin of quite a lot of us—for a great upsurge of production effort, whether for peace or war, on the part of British industry. We here realize that the main sinew of that effort is research in the industrial sphere. Our concern is to see to it that industrial research is not held back through any failure of the provisioning service which Aslib can supply. But it is also to ensure, by whatever variety of means can be employed, that more and more information bureaux and special libraries are set up in industry to supply to the research departments the vital scientific and technical information on which the satisfactory prosecution of their work depends. So I see that side of our work not merely in terms of services to our existing members, but more particularly in the encouragement of managements to set up new technical information centres which will then look to Aslib for help, through membership, in their daily routine. I have had in mind, Mr. President, as many members already know, to ask Council to employ as soon as possible a consultant on special library work, whose job it will be to encourage the heads of industry in the right direction and to advise them on the practical problems involved in setting up their own special libraries. We also have it in mind to employ additional staff to interest new potential members in our work, to devise with me publicity material aimed at the many diverse interests we desire to serve, and to assist me in making the direct personal approach which must be the principal source of new recruitment. But those efforts by individual people under my direction can, of course, achieve only a limited result, and we must think in still wider terms of the means of securing the establishment of these new organisms in industry and elsewhere. We must make inroads on such strongholds as the B.B.C., the national newspapers and the Chambers of Commerce to see that industry—the people who are directing industry—are convinced of the value of this contribution to their own research work.

We have here what I can perhaps sum up as a national conception of Aslib's whole, not limited in any way to sectional interests, not even to membership interests. The day will come when Aslib will be truly a national organization in fact as well as in intention, when the special libraries and information bureaux will be members of it simply because they cannot afford to stay outside. How near that day is will depend primarily on the speed with which we recruit new members in the next three years. I suggest that one practical means of speeding recruitment is the development of a number of branches in various parts of the country. We are over-centralized in London. I have heard many complaints from the provinces, with most of which I am in sympathy, that often their own local interests are not fully taken into account. Plans are already on paper for the expansion of the branches, as soon as local members can be found who are willing and have the time to devote to the arduous work of organization. We have at present Scottish and Northern branches which are doing sterling work but which can still do even more. By this time next year, I hope that this number will be trebled so that the six principal geographical regions of the country can all boast an Aslib branch.

Even more important than the formation of geographical branches is another plan, which is also on paper, and that is the formation of professional interest groups. By these professional interest groups I mean sections of Aslib organized nationally and consisting of practising information officers from, for instance, the textile industry, or from the heavy steel industry, or special librarians who are also economists or are concerned with the world of business. We must provide for them some means of meeting and discussing matters of common interest to them. But they must also be working groups charged with the duty of performing individual tasks, perhaps of a not very intricate nature, which are clamouring to be done. We have in the past, I think, tended to 'sell' Aslib to our non-member public primarily on the services which we give from the Aslib office in London. Please do not misunderstand me. I am not suggesting that these are not valuable. They are. And they must be expanded and increased in efficiency on the lines which the membership itself demands. But I am suggesting that we have overlooked to a very large extent our greatest capital, which is our ability to provide facilities for the cross-fertilization of ideas among our membership. I am quite convinced that the value of this side of our work is out of all proportion to the immediate concrete benefits that can result. By bringing together librarians and information officers from their own and contiguous fields we shall automatically give the widest possible coverage to the problems that beset us all.

The obvious corollary to the domestic policy which I have based on the national conception of our work is precisely this : Aslib must become increasingly a force for good in the formulation of official policy, that slow but weighty process of converting Government thought into action which many of us feel to be completely out of our reach individually, but which is well within our reach collectively. Issues do arise almost from day to day in which the national libraries and special libraries of this country are involved. It is up to Aslib, as the organized body representing the progressive elements of special librarianship, to see that its voice is heard when official policy is being decided. Many of you, I think, will know that a new committee has recently been set up by the Lord President of the Council under the Chairmanship of Mr. Nicholson to succeed the panel which met under Dr. Alexander King. It is clear from its terms of reference that this committee will carry prodigious weight in advising the Lord President and the Cabinet on what Government policy in relation to special libraries should be. Aslib is already well represented on that Committee by Mr. Fullman, but Mr. Fullman can only be the interpreter of your views. Make them known to him. Through the Nicholson Committee, provided we ourselves know precisely what we want, we have an opportunity to influence Government policy at the highest level to a degree of which Aslib had not even dreamed ten years ago. Many members will also know that we have been active in the last few months, through the Executive and Finance Committee and Library and Information Committee, in regard to the service provided by the Science Museum Library in London. The standard of service which it can maintain is indissolubly linked with Government policy on financing national libraries. We believe that it will be useful not only to keep calling attention to the deficiencies in the Science Library's service, but also to provide a guide to the nature and extent of the services which its readers require. We are now conducting a survey to assess the potential load upon the Library's loan system among other things, and the results will be placed before the Director of the Science Museum this year. What is important is that members should be aware of these national issues as they arise and be indefatigable in bringing their views to the notice of the appropriate Aslib committee.

It follows, Mr. President, that if Aslib is to be the central British body, as it is and will be, for special libraries in the national sense, then it must also be the body to represent this country in the international sense. If the voice of Britain is to be heard in the councils of the world in the field of documentation then, indeed, it is through Aslib that the voice of Britain must be heard. You will know that when the old British Society for International Bibliography was amalgamated with the Association of Special Libraries and Information Bureaux to form Aslib, then the new organization automatically took over responsibility for representing this country in the international movement. That is a moral obligation which I think we should think very carefully about before we ease it off our shoulders altogether. We have recently, in committee, discussed the possibility of joining I.F.L.A. and the F.I.D., but for purely practical reasons it is not possible at present. On the other hand, both my Council and I are deeply interested in the work that is being done by those organizations, and we are concerned that this country should be kept in touch with them. It may be that in the not too distant future Aslib will be able to play a far more active part in one or both of them.

You will notice, Mr. President, that the emphasis in all that I have been saying so far has been on librarianship and information work, and on libraries and information bureaux rather than on librarians and information officers. That emphasis is quite deliberate. The general trend to-day in professional, and indeed in all national life is, as we all know, towards a dichotomy between what I may call the 'content' and 'trade union' functions of organized society. We have, in the past, successfully championed the cause of special librarians, and working conditions and technical qualifications. Now I would like to throw out a suggestion that the trade union function reflected in this activity is not Aslib's real responsibility. I say this quite deliberately because I cannot envisage a single organization serving efficiently and effectively both the technical interests and material interests of our great profession. We must think seriously on the ideal arrangement in relation to those two parallel features. It may perhaps be that the trade union function should rest more particularly on our great sister organization, the Library Association. Or it may be that some entirely new arrangement is called for. But I do feel quite certain that Aslib's purpose should be to concentrate primarily on the 'content' questions of special librarianship; and that, of course, involves what to my mind is perhaps, in the long run, our prime activity—research. In saying this I have probably come as near to being a politician as I ever shall. I have had no experience in librarianship in any form and I speak as an interested amateur. But perhaps you will forgive me if, as a semi-politician, I merely say, 'Let there be research' without knowing precisely what form that research should take. At least the results should be less disastrous than if, as a real politician, I were to say 'Let there be a Coal and Coke Federation', without knowing what the inside of a mine looked like. My advisers tell me, and I am completely in their hands in this matter, that there is still an enormous field for research in special library methods, particularly on the industrial side. I hope to see before long a research committee created which will take care of those matters in which new techniques and new processes are required. This is not merely a question of research alone. A successful research programme means an assured publications programme for some time to come, and publications of a high standard mean the revenue and favourable publicity which Aslib needs.

Everything I have said boils down to this: we know what we want to do, but who is going to do it? Here we are with a small staff in London of about 15 people and a few enthusiastic voluntary helpers. Are we to rely wholly on a paid staff or wholly on voluntary effort, or on a combination of the two? Surely the combination is the answer. But whichever we decide, we have first of all got to have a good deal more money than at present, and that means a good deal more members. If each member in this hall were to recruit one new corporate member in the course of a year, Aslib's income would increase by something like £3,000. But before we can get new members we have got to show them that we can provide just what *they* want, and it is by this co-operation between the paid staff and the outside worker and the member libraries that we shall be able to show just what it is that Aslib can give that no other organization can. We shall never carry out our work properly unless we do make that little extra effort, both staff and members, in every way we can. It is only by putting everything we can into Aslib that we shall be able to draw upon its united strength. The aim must be efficient service. As you rightly said, Sir, in your presidential address a year ago, 'industry is not going to waste the time of its experts in calling upon the services of amateurs'. Efficiency we must achieve in everything we do. That is the ideal I would like to leave with you this morning. But there is one more ideal even greater than that. It is the ideal of service, of devoted service to Aslib, to its members, to the country, to mankind, and, through service to mankind, service to Almighty God. Aslib's high purposes cannot fail if we pursue surely and steadfastly that ideal. Pursue it we must, and pursue it we shall.

Dr. Urquhart said that in considering its future Aslib must consider its past. Originally most of the work done was voluntary, but the present tendency of increased pressure made it difficult to obtain voluntary work. Aslib must now do the work itself, and this required money. Additional finance, he pointed out, was more likely to come from industrial and potential industrial membership than any other and he suggested that in order to attract this the Council should be more representative of those sections of industry which controlled the purse strings. It was not essential that Council members should be experts in the field of documentation.

He suggested that the organization of Aslib should be recast in such a way that the Director was advised on various aspects of his work by Committees and that he should report to the Council. He agreed with the Director that Aslib should not develop on trade union lines, particularly in view of the Government support it was receiving. He felt that there was need for some such professional institute, but that Aslib should not be made to fill that need.

Dr. Urquhart had heard suggestions that H.Q. Intelligence D.S.I.R. was tending to usurp the functions of Aslib. He emphasized that this was not the case. Aslib's concern was with the organization of bodies dealing with the distribution of information and not with the information itself. He instanced the D.S.I.R.'s publication of the *Translated Contents List of Russian Periodicals* which was achieved with very little work on the part of the D.S.I.R. through the co-operation of the various information services. It was this co-operation between information services which Aslib should foster.

Dr. Urquhart pointed out that the optimum level of information service was not yet known. The D.S.I.R. had formulated this problem but could not solve it without the help of such organizations as constituted the membership of Aslib. He suggested that Aslib should not attempt to become a technical information service except in matters relating to the technique of the Information Officer's job. He pointed out that much work had been done apart from the work carried out by Aslib, and instanced the Royal Society's Scientific Information Conference. Considerable activity had followed this conference, none of which was outside the field of Aslib, and he felt that it was some measure of the distance yet to be traversed that this activity was carried out by the Royal Society and not Aslib.

Mr. Agard Evans paid a tribute to the early founders of Aslib and pointed out that in fostering the far-reaching ideas of these great men Aslib had carried out its most important work and pleaded that this atmosphere in which new ideas could develop should be retained by Aslib even at the cost of more practical issues.

Aslib's task, he said, was to facilitate, encourage, and promote rather than to act, in the way that it had launched the *British Union Catalogue of Periodicals* and the British Building Documentation Committee. Referring to the Director's proposal to employ a library consultant, Mr. Evans advocated a panel of consultants rather than an individual. He maintained that one individual could not advise on the many aspects of special librarianship. He recommended that the consultant chosen to advise on the setting up of a library should also offer advice on the personal qualifications of the staff to be appointed to counteract the present tendency of industrial executives to regard the librarian's job as a part-time occupation.

He considered that Aslib could not escape responsibility for defining qualifications, but should not undertake training or examining. Aslib, he said, should not spend time answering individual enquiries, but should act purely as a switch-board in passing an enquiry to a source of information He was convinced that the publications side of Aslib should be developed, and that weight should be given to the publications section even at cost to other sections.

He said that he was very ashamed at the failure of this country to support the International Federation for Documentation. In Britain's default the lead in international affairs was being taken by the French. He hoped that our moral obligation in foreign relations would be taken very seriously by the Council. He emphasized the need of Aslib as a centre where foreigners might be received and put into touch with the contacts they needed in this country.

Miss Ditmas said that she would always be interested in the future of Aslib. She, probably more than any other, had known its struggle in the past to prove its present worth. She was confident that the Director and Council would carry out the further development which the generosity of the D.S.I.R. had made possible.

Dr. Campbell urged that Aslib should never forget that its tasks went beyond industry. Good information and library services were a vital need in medicine and other fields. The Royal Society's Scientific Information Conference recommended 'that information officers and special librarians should . . . receive comparable treatment in training facilities, rank and emoluments' to that of fellow scientists. In spite of this there were no arrangements for international exchange or foreign study for librarians, though teachers had secured them.

Mr. Granheek welcomed the suggestion of a further development of provincial branches. He felt that something more should be done for university and college libraries, which, incidentally, were training personnel who would later become the users of the libraries. In his part of the United Kingdom there was only one other Aslib member, and he thought that more 'missionary' work should be done to attract new members.

Mr. Young drew attention to the potential value to members of Aslib of county library systems and their branches, as distinct from municipal library systems, for the supply of general information. He suggested that provincial branch meetings should be held in towns easily accessible from other provincial areas; he had on occasion been unable to attend branch meetings because of bad connexions.

Miss Exley said that something concrete in the way of service must be offered to attract the smaller firms into Aslib. She paid a tribute to the work of the Northern Branch and thought that more small branches in different districts would do much to increase membership. She doubted whether any firm would extend facilities to a consultant for long enough for him to become familiar with the complexion of the firm.

Mr. Goddard referred to the need for testing out the scientific methods now available to facilitate the work in libraries. It was essential that experiments be carried out on electronic and other devices.

Many special libraries were attached to organizations which were particularly able to help in this work, owing to the ready availability of apparatus, technicians and workshops. Aslib might very well draw up a list of its member libraries which could be approached to test and report on particular types of apparatus. Although it might be difficult for a librarian or information officer to persuade his firm to allow such experiments to be conducted in the firm's library, an approach by Aslib as a national body would probably be received more favourably. He suggested that the Royal Society, which was interested in such matters, might be persuaded to help by making subventions from its special funds for research to any library taking part in this work.

Mr. Coates was concerned at the suggestion that individual enquiries should not be dealt with by Aslib. On any subject outside his own field, he said, Aslib had always been most helpful. He also urged that Aslib be concerned with the status of librarians and information officers, who, he said, could only provide efficient service if they commanded the respect of their colleagues.

DR. URQUHART said that the suggested accent on industry had not arisen in any way from the fact that the Government grant came through the D.S.I.R. The grant was from the Government and it was a point of national policy to develop the industrial field. He also pointed out that most universities and similar bodies were already members, and the vast majority of potential members would be found in the industrial field.

MR. HANSON said that the usefulness of a journal could be tested by the number of times to which it was referred. By the same test it must be admitted that Aslib had not reached fruition. During the several recent moves of B.S.I.R.A. he had searched for information on library planning and found very little factual information from Aslib. Aslib papers he considered were too general and should contain more factual data. Research into techniques was most important; individual judgment was much safer based on factual data.

MR. WOLEDGE said that the proposal to lay special stress on the industrial side of Aslib's work related only to the immediate future, and that as a long-term policy Aslib must continue to hold the balance between the different interests of its members. He promised, as Hon. Secretary, that the Council would give careful consideration to all suggestions arising from this session.

MR. DUMVILLE hoped that the day would never arrive when the Aslib staff would lose personal contact with its members. The value of Aslib to his company was in the meticulous manner in which it had gone to much trouble in answering what might be termed 'small inquiries'. He took this opportunity of paying a tribute to the courteous attention which he had received in the past from the Aslib staff.

MISS SCHAFER said that Aslib would perform a most useful service if it could persuade professors and university appointments boards that special-librarianship offered as good a career as many laboratory jobs, and was not to be regarded as a last resort for the failures of the science schools. Many librarians were having difficulty in recruiting good assistants, and it should be the concern of Aslib to see that such assistants were attracted to the profession.

MR. BISKE suggested that the small inquiries Aslib received, together with the answers given, should be published in *Aslib Information.*

MR. GREEN said that there was considerable demand in the 22 Spanish and Portuguese-speaking Republics for an issue of the *Aslib Directory* in sufficient detail to act as a practical guide to professional contacts and sources of information.

MR. WILSON thanked the contributors to the discussion and said that he knew from experience that the Council would deal fairly with all suggestions. There was no proposal that Aslib should in any way ignore fields outside industry. Aslib's own field was all knowledge.

The proposal that the Library Association should take over the trade union aspect was, he knew, a delicate one. Although there were two organizations, each performing functions for librarians, there was only one profession of librarianship, and he promised to apply himself to the problem of accommodation between the Library Association and Aslib.

LIBRARY RESOURCES OF BRISTOL AND THE SOUTH-WEST

By F. L. Kent, M.A.

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The Area and Its Library Problems

THE area covered by the South-Western Regional Library System comprises nine counties : Cornwall, Devon, Dorset, Gloucestershire, Hampshire, the Isle of Wight, Oxfordshire, Somerset, and Wiltshire. Had it been possible simply to assume that any area containing the University of Oxford must necessarily possess almost infinite library resources, local library problems might safely have been left to solve themselves and this paper could have been brought to an abrupt end forthwith. But neither the Bodleian nor the college, departmental and other special libraries of the University can fairly be described as forming part of the library resources of the south-west ; Oxford is on the extreme edge of the area and its libraries, in so far as their use is not confined to members of the university, are manifestly of national and not regional importance and scope. It is, therefore, entirely reasonable that the recent important amendment to the Bodleian rules which permits the loan of non-copyright material from the Radcliffe Science Library should have stipulated that such loans be negotiated through the National Central Library and not through the Regional Bureau. The presence within the Region, however, of one of the world's greatest libraries confers inestimable benefits on all who find themselves within tolerably easy reach of it, and the Bodleian has always been generous in assisting librarians in the south-west. For the purposes of this paper it would be as futile to attempt to describe the Bodleian and the other Oxford libraries in a few sentences as it would be preposterous to omit all mention of them, and it has therefore seemed best thus briefly to assess their position at the outset before passing to a description of the resources and problems of the Region as ordinarily understood.

The Region is predominantly rural, none of the largest centres of population (Bristol, Portsmouth and Southampton, Plymouth and District, and Gloucester) being in any way comparable in size with the great centres of the midlands and north. Such industry as exists is scattered and diversified—mining in Cornwall, coal in Somerset and Gloucestershire, shipping at Southampton, Plymouth and Bristol, railway works at Swindon, Eastleigh and Gloucester, aircraft and motors at Bristol, Gloucester and Oxford, tobacco at Bristol—and there are numerous service and government establishments, particularly on Salisbury Plain, in northern Hampshire, and in and around Portsmouth and Plymouth. There is no great concentration of any one kind of activity. There are universities or university colleges at Oxford, Bristol, Southampton and Exeter. By far the largest municipal library is that of Bristol, which is also the geographical mid-point of the Region and the largest industrial and commercial centre.

In this area almost everything is on a moderate scale except the distances (it is 250 miles from North Oxfordshire to Land's End and 125 miles from Ventnor to the most northerly point in Gloucestershire, and Bristol is nearer in travelling time to London, Birmingham and Cardiff than to Plymouth, Southampton, Portsmouth or even Oxford) ; and this is the fundamental reason why inter-library co-operation in the south-west is at the same time so difficult that the South-Western Regional System was the last English system to be established, and so essential if an efficient library service is to be provided and the greatest possible use made of the resources of the smaller as well as the larger libraries. It has followed that, whereas in the adjoining West Midlands Region over 80 per cent. of requests are supplied by the Birmingham Public Library, not because other libraries cannot or will not co-operate, but because it is found to be quicker and more convenient to supply loans from Birmingham, the South-Western Regional System is among the leaders in spreading loans. The county libraries in particular play a very large part in lending; and the tendency, already noticed elsewhere (and indeed remarked upon in the latest report of the Lancashire County Library), for books of a technical nature to be in increasing demand in county libraries results in some very high borrowing figures also. Devon, for instance, lent 2,265 books and borrowed 3,518 through the South-Western System in 1949–50. With forty-nine co-operating libraries to draw on, the South-Western System is one of the smallest in the country, yet in 1949–50 it lent more books to its own libraries than any other system except the South-Eastern and more to other systems through the National Central Library than any except the North-Western and the Northern—even the smallest libraries contributing very considerable numbers of books.

The existence in Bristol of two of the largest libraries in the Region, the City and University Libraries, pointed to that city as the obvious centre for the Regional Headquarters, and this was established in the City Library in 1936. Of the forty-nine co-operating libraries, nine belong to the counties, six are university or special libraries, and the remaining thirty-four belong to municipal or urban authorities. Of the special libraries not members of the system many are 'outliers' of the National Central Library and others have from time to time generously consented to lend in response to some special request. In 1949–50 the Regional Headquarters received 35,000 applications and satisfied 29,400 of them, 23,300 from within the Region. The Regional union catalogue contains some 307,000 entries, and is at any rate no less up to date than those of other Regions—though all these union catalogues urgently need larger financial resources and staffs to bring them and the National Central Library's union catalogue into a satisfactory state. The question of subject specialization in the public libraries of the Region is being studied in the light of experience of the scheme already adopted in the South-

Eastern Region. The editors of all the Regions have recently formed themselves into a Circle of Regional Editors, which held its inaugural conference in Bristol in June of this year.

THE CITY AND UNIVERSITY LIBRARIES OF BRISTOL

Bristol had a library in the fifteenth century, to which any citizen who could read or who wished to listen to readings had access. Nothing survives of this collection, which presumably perished when All Saints' Church, Corn Street, the headquarters of the Guild of Kalendars to which it belonged, was destroyed by fire. In 1613 Robert Redwood gave his house in what is now King Street for conversion into a library; a City Library was built in the following year, and some books and manuscripts were presented by Tobias Mathew, Archbishop of York, himself a Bristolian, which formed the nucleus of the present library. In 1740 was built, in King Street, the building, still surviving though damaged in the war, which served with alterations and additions as a City Library until the present Central Library was erected in College Green in 1906. From 1772 to 1855 the building was in the possession of the Bristol Library Society, a private association to which the public library appears to have been subordinated; the society moved to another building in 1855, but finally handed its books over to the City in 1894, when they were incorporated into the main collection. The presses, doors and Grinling Gibbons chimney-piece were transferred to the new building in 1906. The present library system consists of the Central Library—containing the Reference, Commercial and Patents libraries and the local and other special collections, the children's library, a large lending department, and the South-Western Regional Headquarters—and fifteen branches (of which one in particular, at Southmead Hospital (1949), has attracted widespread attention as being the first branch public library to be opened within the buildings of a hospital). Sites are reserved for nine more branches to be built as soon as possible. The book stocks now stand at nearly 200,000 in the reference departments and 250,000 in the lending departments, a total of some 450,000 volumes, and there are important holdings of periodicals. Out of a population of 435,000, 102,000 are registered borrowers, and they borrowed nearly 3½ million books in the year 1948–49, or 7.78 per head of population—against 2,600,000, or 6.34 per head, in 1938–39. The special collections belonging to the City Library are briefly noted later in this paper.

The University Library in its present form dates from 1923, when the present main buildings of the University were under construction and the first full-time paid University Librarian was appointed. A library wing of three floors comprised stack rooms in the basement, a medical library at ground level and an arts and law library, with a librarian's room, on the upper or principal floor. An extension completed in 1940 added four more stack rooms, much-needed ranges of offices, a large entrance hall and a subsidiary reading room on the principal floor, and an internal staircase and passenger lift to connect the whole. An attempt has been made in articles in the *Journal of Documentation* for December, 1949, and the *Library World* for June, 1950, to describe the history and organization of the University Library in detail, and since some of the more interesting special collections will be mentioned in the appropriate places below, it may suffice here to give the latest statistics in brief. The library at present contains 165,000 volumes, 39,000 pamphlets, and about 3,500 sets of periodicals, of which over 1,500 are current. The student body and the academic staff (now 3,000 combined) have doubled in size since the end of the war—so indeed has the library staff—but the use made of the library is now five times what it was then, and the problems of congestion and of keeping pace with work are becoming more and more acute. While the science departmental libraries, though centrally administered, are still actually looked after by departmental and not by library staffs, the central organization has undertaken many new commitments since the end of the war, including among others the responsibility for staffing as well as administering the libraries of the Faculty of Engineering, the Institute of Education, and the Department of Adult Education. Future plans include the construction of new engineering and medical blocks, each with its own library, and further extensions to the main building.

OTHER GENERAL LIBRARIES IN THE REGION

The largest public libraries of the south-west, apart from that of Bristol, are those of Bath, Bournemouth, Cheltenham, Exeter, Gloucester, Portsmouth and Southampton. The Central Library, Plymouth, was destroyed in the war but has succeeded in restoring its stocks to about 80,000. Among the newer libraries are those of Swindon (1943), now rapidly growing in temporary premises, and Weymouth (1944). The university colleges at Southampton and Exeter have collections approaching the 100,000 mark, the latter being housed in the Roborough Library, opened in 1940.

There are several old subscription libraries, some of considerable size and importance, among which may be mentioned the collection of 20,000 volumes at Tavistock Abbey (1799); the Morrab Library at Penzance, the headquarters of the Penzance Literary Club (1818; 34,000 volumes); the Royal Literary and Scientific Institution, Bath (1825; 20,000 volumes), which allows a limited amount of lending; and the G.W.R. Mechanics' Institute Library at Swindon (38,000 volumes), which is open to the public by subscription. This library and that of the North Devon Athenæum, at Barnstaple, are members of the South-Western Regional Library System. The North Devon Athenæum is also an 'outlier' of the National Central Library; so are the Plymouth Proprietary Library and the Devon and Exeter Institution.

Of the county libraries, Devon is the largest, with 350,000 volumes and thirty branches. Gloucestershire and Wiltshire both hold between 150,000 and 200,000 volumes. As might be expected in this rural area the proportion of part-time branches and service points is high. It is pleasant to record once again here that all nine county librarians not only make very considerable use of the Regional System, but also take a generous view of their responsibilities in the matter of inter-library lending.

Special Libraries and Collections

An attempt is made in the following paragraphs to survey the special collections of the public libraries of the Region and the independent special libraries in various fields of study. For reasons both of space and of simplicity, the departmental libraries and special collections of the Universities of Oxford and Bristol, and the University Colleges at Southampton and Exeter, are only mentioned in cases of special interest. Information on them is relatively easy to come by if reference is made to the calendars and prospectuses issued by the universities and colleges and to the literature on them, and it therefore seemed better to concentrate upon libraries and collections upon which information is less generally accessible.

Local Collections

Bristol is fortunate in having both a fine local collection and a noteworthy series of archives. The former, in the Central Public Library, contains more than 15,000 items (catalogue *Bristol Bibliography*, 1916); the latter is in the City Archives department at the Council Offices. The University Library, though not attempting to compete with either the Central Library or the City Archives, has a small collection of local documents largely concerned with the West Indies trade, including the papers of the Pinney family (Bristol and West Indies merchants) from the late seventeenth century onwards. The libraries of the Bristol and Gloucestershire Archæological Society and of the Cotteswold Naturalists' Field Club are in the Gloucester Public Library, which also possesses a Gloucester collection of some 15,000 items (catalogue, 1928). The Shire Hall contains the important Hyett Library of Gloucestershire books (catalogue, 1949).

Taunton Castle contains the library of the Somerset Archæological Society (a general collection of 40,000 volumes containing a large proportion of local items), and Yeovil Public Library has the Tite Somerset Collection. The very valuable Emanuel Green Library, in the Central Library, Bristol, contains over 7,000 Somerset items, many of great scarcity (catalogue *Bibliotheca Somersetensis*, three volumes, 1902). There is a large Bath collection in the public library there. In Exeter City Library are the libraries of the Devonshire Association and the Devon and Cornwall Record Society, and there are Cornwall collections in the City Free Library, Truro, and the public libraries at Penzance and Falmouth—the last-named having special reference to Cornish mining, engineering and maritime history. Winchester and Portsmouth City Libraries have built up considerable Hampshire collections, and University College, Southampton, has the Cope Collection of Hampshire books. The library of the Dorset Natural History and Archæological Society is in the Dorset County Museum at Dorchester.

Scientific and Technical Libraries

While a surprisingly large number of important scientific and technical libraries is to be found just outside the boundaries of the Region, there are relatively few of large size within them. By far the most important is, of course, the Radcliffe Science Library at Oxford; on the history of science, the Museum of the History of Science at Oxford and the university and university college libraries at Bristol, Exeter and Southampton possess a considerable amount of material. Of the departmental libraries of the University of Oxford some are members of Aslib and some are National Central Library 'outliers'. The formerly separate library of the Faculty of Engineering in the University of Bristol became part of the University Library in 1949.

Among Government libraries is an interesting group belonging to or in some way connected with the fighting services, including the libraries of the Naval Construction and Engineer-in-Chief's Departments of the Admiralty at Bath, the Royal Naval College, Dartmouth, and the Port Libraries at Portsmouth and Devonport (professional and technical collections for naval use only); the Aircraft and Armament Experimental Establishment of the Royal Air Force at Amesbury and the Ministry of Supply's National Gas Turbine Establishment at Farnborough; the same Ministry's Chemical Defence Research Department at Porton, near Salisbury, and the Military College of Science, Shrivenham. Bath and Portsmouth City Libraries have naval collections which may suitably be noted here.

Transport of one kind or another is represented by the Bristol Aeroplane Company at Filton, Rotol at Gloucester, and the railway collection which is being formed in the Swindon Public Library; metallurgy by the National Smelting Company, Avonmouth, the Zinc Development Association, Oxford, and the Aluminium Laboratories at Banbury; and mining and geology by the Metalliferous School of Mining, Camborne, the special collection on Cornish mining in the Falmouth Public Library and the Royal Geological Society of Cornwall (which is an 'outlier' of the National Central Library). Acheson Colloids, at Plymouth, British Cellophane, at Bridgwater, and W. D. & H. O. Wills, of Bristol, represent manufactures of various kinds. Bristol City Library has a large commercial department and patents collection, housed in the Central Library building.

A group of agriculture and forestry libraries includes those of the Agricultural Economics Research Institute, the University Department of Agriculture, and the Imperial Forestry Institute—all at Oxford—and of the Long Ashton Research Station, Bristol. The newly-established University of Bristol School of Veterinary Science has a veterinary collection which, at the moment in its early stages, is intended in due course to be as comprehensive as possible, and already holds substantial runs of periodicals. In natural history, Cheltenham Public Library contains the Day Natural History Collection, and the library of some 10,000 volumes of the Bristol Naturalists' Society is housed in the Bristol City Museum. This library recently opened negotiations with the National Central Library with a view to becoming an 'outlier'. In Plymouth is the research library of the Marine Biological Association. Bristol University has in the Wiglesworth Library an outstanding ornithological collection. The chief medical collections are, of course, those of the universities of Oxford and Bristol, the latter being an amalgamation of the library formed by the University Medical School and that of the Bristol Medico-Chirurgical Society (which itself incorporated earlier hospital and other collections). To a library already containing many valuable early works was added at the beginning of 1950 the Parry Soden collection formerly belonging to the Bath Royal United Hospital and for some years housed in the Bath City Library—a most important acquisition including a large number of rarities. An interesting special collection is one on mineral waters and spas, containing numerous items on Bath and Clifton, but not by any means confined to these two watering-places. Through the Medico-Chirurgical Society, members of which have reading and borrowing rights, the University of Bristol Medical Library is open to the medical profession in the city as well as to university students and staff.

Libraries of Law, Sociology, Education, etc.

The library of the Somerset Law Society (25,000 volumes) is housed in the Public Library at Taunton. In Bristol, the Bristol Law Society and the University have collections which to some extent supplement each other. Nuffield College, Oxford, the Administrative Staff College at Henley, the Institute of Experimental Psychology at Oxford, and the Institute of Education in the University of Bristol also seem to fall within this admittedly rather miscellaneous group. Among school libraries, those of Winchester, Sherborne, Marlborough, Clifton, Bristol Grammar School, Dartington Hall and Cheltenham Ladies' College must be noted—the last-named being a member of the South-Western Regional Library System.

Cathedral and other Theological Libraries

Exeter Cathedral Library (1050) contains about 25,000 volumes, including mediaeval manuscripts, *incunabula*, and many works on theology and law. Salisbury Cathedral Library has 9,000 volumes and 200 manuscripts, the Chapter Library at Winchester 4,000. There are also cathedral libraries at Gloucester, Truro and Wells; that of Bristol was destroyed in the riots of 1831 and rebuilt in 1923. Among the abbeys, Buckfast and Downside must be mentioned; the library of Quarr Abbey, near Ryde, is an 'outlier' of the National Central Library. There are good libraries in the theological colleges at Salisbury, Wells and Warminster (St. Boniface), a fine methodist collection at Didsbury College, Bristol, and a first-rate library of 25,000 volumes at the Baptist College, Bristol, containing many early printed books and bibles, of which the chief treasure is a splendid Tyndale of 1525. The Thorold and Lyttelton Library in the Cathedral Close at Winchester is a lending library for the clergy of the dioceses of Winchester, Portsmouth and Guildford; at Truro is Bishop Phillpott's Library (1866), a subscription library of theology with a large Wesley collection.

Special Collections on Literature, Drama, etc.

Bristol City Library contains the Stuckey Lean Collection on philology, proverbs, etc. (catalogue, 1903), and a fine collection of plays (catalogue, 1950). The Drama Library at Bath is a subscription library, containing a reference section with many works on costume and a collection of sets of plays for lending. Torquay Public Library has the Moyse Collection of 7,000 volumes on English literature, Anglo-Saxon, drama, etc. The University of Bristol has valuable special collections of early English novels from 1650 to 1850, of courtesy books and of early editions of English philosophical writers of the sixteenth–eighteenth centuries.

Private Libraries

The omission from this paper of a detailed survey of private libraries does not by any means indicate a lack of appreciation of the importance and value of the private library. But the relaxing air of the south-west does not appear to have favoured the growth of great collectors, and the district was at no time particularly rich in the fruits of their efforts. Three of the finest private collections, William Beckford's from Fonthill, the 'Bibliotheca Phillippica' of Sir Thomas Phillipps at Cheltenham and the Earl of Malmesbury's at Hurn Court, have come under the hammer, and perhaps the most notable survivor is that of the Marquess of Bath, at Longleat.

A tiny private collection of interest was made public as long ago as 1736, when the Rev. Samson Harris left his library to the parish of Stonehouse, in Gloucestershire. This little library, to which a few additions have been made since, now contains some 750 volumes of various dates between the early sixteenth century and 1900.

CONCLUSION

This survey of the libraries of the south-west cannot pretend to be complete. In particular, many special collections and special libraries have necessarily received brief or inadequate mention or no mention at all. Yet it is hoped, both that some indication has been given of the resources of the Region, and that due note has been taken of the willingness with which, wherever possible, libraries of all kinds have made their collections available through the Regional System or the National Central Library for general use. The library service of the Region as a whole may indeed be far from perfect, but it can be stated with confidence that future efforts to improve it will not fail through lack of support.

ADDENDA

Since this paper was presented, the annual reports for 1949–50 of the National Central Library and the South-Western Regional System have appeared and the figures on page 188 have been amended accordingly. I should have mentioned, among Government Libraries, the branch library of the Ministry of Works at Bristol. The library of the Bristol Aeroplane Company is now an 'outlier' of the National Central Library. In art and archæology, the most important collection in the Region (outside Bodley) is that of the Ashmolean Museum, Oxford.

REPLANNING OF LIBRARIES

By M. Exley, F.L.A.

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THOUGH special libraries are now accepted as an integral part of most commercial and industrial concerns, most societies and institutions, they are rarely housed in premises suited to their needs. Few special librarians have the opportunity of planning a new library, but more frequently are they faced with the problem of adapting premises which at the outset are totally unsuited to library purposes. Special librarians should be very critical of premises which are offered to them. Anxiety to get a few extra square feet of room should not sway the librarian to accept a room where the windows are badly placed, the radiators taking up wall space needed for shelving, buttresses breaking up the wall surface, uneven floors, inadequate ventilation, etc. The practice of housing the library in the Board Room or Conference Room is fortunately passing, but should be resisted very firmly as impracticable.

It is essential before attempting to adapt premises to have a very clear picture of the service which a special library should give, and I propose to go into this in some detail relating it, at the same time, to the planning of premises. A special librarian must, above all, have vision. He must anticipate increased demands on his service ; he must be prepared for any expansion in the organization which the library serves, and though certain services may not at the time of planning be necessary, he should keep them well in mind.

What services might a special library be expected to give ? The average special library has to cover the services given by a civic information bureau, a general reference library, and one or more subject-specialist research libraries ; in fact, it must be prepared for all types of enquiries. How then are the premises to be divided ? The librarian must at an early stage decide whether he is to make provision for a reading room, a stack room, a periodical room, carrells or study rooms, photo-copying room, special collections rooms, separate office accommodation and workrooms.

The majority of special libraries are in the main reference libraries and therefore the position of the library geographically in the organization is important. The library should be nearest its main source of readers—they may be factory workers, research staffs, nursing staffs, etc. If the library serves a society or institution where some readers call personally and others have a postal service, the library should be placed near to the entrance to the building in order to save the time of the readers who call personally. No library should be placed under laboratories as the risk of floods is a very real one in industrial and scientific research organizations. The library should be at a reasonable distance from any laboratory or department which is likely to create offensive smells in the course of its daily work. The library should be reasonably sound proof and some distance from heavy goods lifts, noisy machinery, cloakrooms, and tearooms where chatter might make a disturbance. Good, natural lighting is essential and the position of the windows in relation to outside noise should be watched most carefully. All these points can easily be watched when a new building is being erected, but achieving these ideals in old premises is more difficult.

The reading room may be planned to form the reference room for all the library resources or it may only house the books and pamphlets. Some librarians favour housing all journals and periodicals in a separate room. The history of a periodical must be considered in three stages. First of all the librarian must make sure full use is made of the periodical as soon as it is received. If the journals are to be displayed in the library to serve this end suitable provision must be made. The journals may be displayed on tables or on upright stands, provision for either of these affecting the layout of the reading room. Display on upright stands is undoubtedly most economical of floor space. The librarian must next decide how he is to file journals whilst they are accumulating for binding. Where some hundreds of journals are received regularly this is a problem requiring some attention. The journals may be filed together, and special shelving is required. Standard shelving divided into pigeon-holes can be purchased for the purpose. In a research library the reader will require ready access to these unbound files of journals, and one section of the library should be set apart for them. It is best if the current journal displays can be adjacent to the unbound files with tables nearby for use when consulting the journals. Finally, the librarian must decide on the disposition of the bound files of journals. Are they to be filed in the main reading room—along with the text-books or in a separate sequence—or are they to be filed in a room set apart for journals and periodicals only? Any premises to be adapted might present themselves more favourably in the light of such a division of stock, though otherwise I can see little advantage.

Shelving in a special library is very frequently higher than in the average municipal library. Seven-foot shelving is no exception, and though it should ideally be reduced, it would mean a great sacrifice when long files of bound volumes have to be housed. Where wooden shelving is installed and where expansion is limited, it would be wise to have the shelving made with a detachable cornice so that an additional three feet or more of shelving can be added, taking the shelving higher up the wall. At the present time when research organizations are converting old mansions to their specialist use, and where expense is not too limiting a factor, the librarian should aim to install shelving which to a degree is suited to the style and architecture of the library rooms. In doing this, usefulness can be combined with design. The relative merits of steel and wooden shelving must be judged according to the library and its particular circumstances. The fact that a library is in the heart of a large industrial concern should not mean that it must be furnished with dull green steel shelving. Wooden shelving can now be purchased and manufacturers of steel shelving are now prepared to finish shelving to suit individual tastes. Light grey, light green, and burgundy are colours which are now listed, and it is hoped special finishes to imitate wood will soon be available as they were before World War II. When purchasing steel shelving the librarian should beware of shelving which is scheduled as adjustable, but, in fact, requires to be almost dismantled in order to adjust the shelves. Equally, some steel shelving is so readily adjustable that it is unstable. Slotted shelving, though expensive, is the ideal. At the present time more and more librarians favour shelving which is fixed. Where a librarian already has a percentage of shelving which he proposes to use along with new shelving he might well ask the manufacturers to match it up, if necessary respraying the old shelving to give a uniform finish. The majority of special libraries need deep shelving because of the large percentage of bound volumes which have to be housed, and shelves 12 in. deep are recommended. The natural lighting will to some extent determine the layout of the shelving. Arrangements in alcoves, with a reading table in each alcove, gives a certain amount of seclusion to readers. It also divides the book stock into broad subdivisions which may be a disadvantage where the subjects covered do not easily divide themselves.

Accommodation for the readers in a special library will vary a little according to the policy of the library. Where the lending of books is discouraged more seating accommodation will be required. Individual tables with comfortable chairs with wooden arms are ideal. One table might be set aside as a drawing table and drawing boards, tools, etc., provided. Good solid book-rests for the heavy volumes and easily adjusted lighter type book-rests should be provided for general reading.

The provision of study rooms or carrells such as is provided in university libraries and in the larger municipal reference libraries should not be considered a luxury in special libraries. Such provision would be most acceptable to research workers who wish to consult an accumulation of volumes which may not be taken away from the library. Each study room should provide a desk of ample proportions, book shelves, reading lamp, and at least one drawer where the reader can leave notebooks, etc. The study rooms should have natural lighting and be well ventilated and heated.

The catalogues and indexes for a special library may be unduly large by comparison with the size of the book stock, and the librarian must at the outset decide whether the cabinets should be housed in the reading room or whether they should be housed in a separate room. If they are placed in a separate room this should lead directly off the library, though further access from an outside corridor should be arranged. The opening from the catalogue room into the reading room need not have a door, thus speeding up consultation between indexes and books.

In a central position in the reading room should be placed an enquiry desk. If it is anticipated that the assistant in charge of the desk will not be fully occupied attending to readers, and therefore will be doing library routine work, the desk should be large enough to hold piles of books, papers, etc., additional to the normal requirements of an enquiry desk. Too often the assistant on an enquiry desk is expected to work on too small a desk and is lost behind piles of books.

The position of the microfilm reader may be considered best in the reading room. A suitable position should be found away from the windows and reasonably near to the cabinet which holds the microfilm and film strip. If the librarian has made provision for study rooms he may consider it best to place the microfilm reader in one of the study rooms. This would ensure the reader quiet in his reading and his using the microfilm reader would not be distracting to other book readers.

The stack room in so many special libraries comprises that bit of a basement store room which has been wrested from some other department, and it is most frequently no more than a store room. The stack room should be planned most carefully at the outset to give good service and if possible to permit expansion at a later date. The stack room should be as near as possible to the main reading room so that readers can have ready access to it. Where the readers have open access to the stack the gangways will have to be wider. Good lighting between the stacks must be installed. Where the stack room has to be planned to hold a maximum of books the librarian should investigate the possibility of a gallery or double-tier stack. This will depend entirely on the height of the room. The ground floor stack does in effect carry the deck floor of the upper stack. Where the height of the room will not permit the building of a deck-floor stack the librarian may have to resort to rolling stacks which run on ball bearings and which can be pulled out individually. Such accommodation is usually a final resort and not the fruit of first planning or adaptation.

A librarian should be very far-sighted in his provision of a room for photo-copying. Though no photo-copying apparatus is in use at the time of any replanning scheme it would be wise to earmark a suitable room, temporarily using it for storage purposes. In considering the best place for a photo-copying room the librarian may be able to use up a room which has little or no natural lighting. The room must have suitable drainage and it must be possible to bring gas and electricity services to the room without involving undue expense. Adequate ventilation of the dark room must be assured.

The photo-copying room must be planned with great care. Experience has proved that such a service will almost inevitably grow and ample provision should be made. The merits of the different photo-copying processes and apparatus must be assessed by the librarian in relation to the work he anticipates having to handle and also in relation to his finances. Economy at the outset may not be real economy and the purchase of a machine which will copy only small items is not advised. The layout of the photo-copying room should be considered most carefully to allow a smooth, uninterrupted flow in the processes—from copying to developing, to fixing, rinsing, squeegee, and drying. A flat bed dryer may be considered adequate, but if any quantity of work has to be done a rotary dryer will be a great asset, though taking up a lot of room. Working space is needed round the rotary dryer, which will stand on a table and is approximately 4 ft. 6 in. long and 2 ft. 6 in. wide. If the organization has a safety officer his approval of the arrangement of the photo-copying room might well be sought before the erection of the apparatus. Enamel or other suitable trays are sold for developing, fixing, etc., but if finances permit it is much better to have sinks built for the various processes. This would, of course, be economical only where a fair amount of work is done. The administration of a photo-copying service involves the storage of rather cumbersome rolls of paper, chemicals, etc., and therefore as much cupboard space as possible should be planned. Underneath the developing trays or sinks might well be utilized for this purpose. Shelves for bottles should be built at a convenient height and where there is no danger of the bottles falling down. Material which is to be copied will need to be handled very carefully and therefore the photo-copying room should have adequate table space and shelving. The sinks, working bench, etc., should be set at a convenient height for the operator and not at a height which means he will suffer from backache. The entrance to the photo-copying room should either be kept locked whilst work is in progress or should be provided with a double door device to safeguard the admission of naked light whilst work is proceeding.

Consideration should also be given to the housing of any special collections such as patent literature, trade catalogues, confidential reports, etc. Are these to be housed in the reading room, in the stack room, or each in a separate room ? If confidential reports, for instance, are filed in vertical filing cabinets the argument for a separate room might have a strong recommendation. A collection of confidential reports, which will never become redundant, will grow very quickly and resort to microfilm to reduce their bulk will only be made a number of years after publication of the reports. Another factor in favour of planning separate provision for confidential reports is the possibility of only senior members of the organization being given access to them.

The special librarian must not allow his zeal in planning a good reading room, stack, etc., to prevent him from giving consideration to working attending his staff. In a special library the number of staff who work in space for room' abstracting, indexing, receiving and circulating journals, the 'back to interloans, etc., will be large by comparison with the staff engaged in a more advisory capacity. Good working conditions must be provided for such workers.

In this brief paper no attempt has been made to give facts and figures such as approximate area of the various rooms suggested. It is doubtful that the needs of any two special libraries are identical and even more remote is the possibility that any two librarians will have similar facilities open to them when planning or replanning their libraries. In so short a survey it has not been possible to discuss the technicalities of heating, lighting, ventilation, etc. Fluorescent lighting has improved very considerably since its doubtful début into the library field. In the reading room individual table lamps are an added amenity. Concealed heating panels may be possible in a new building, but adapting an old building the librarian may be obliged to use that form of heating which is already installed. Water heating is preferable to steam heating as the temperature can be better controlled. It is no longer necessary to have ugly radiators in the room and Vectair heaters may be used at the end of stacks or at any other suitable points. To use up wall space on radiators may mean shelving is being sacrificed. Details such as books per foot of shelving, square feet of room per reader, per staff, height of tables, etc., have not been given as they have been most adequately discussed elsewhere.[1, 2, 3] A plea is made for more orthodoxy in special librarianship and for fewer special libraries which are content to remain the gawky offspring of the Sales Department, the Publicity Department, the Chief Chemist's office, etc.

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[1] ASHBURNER, E. H. 'Modern public libraries: their planning and design'. *Grafton,* 1946. 25*s.*

[2] CARTER, EDWARD J. 'The planning and equipment of research libraries and information bureaux'. ASLIB *Report of Proceedings of the Twentieth Conference*, 1945, pp. 65–73.

[3] PIERCE, S. ROWLAND. 'Some notes on the planning of research libraries'. ASLIB *Report of Proceedings of the Twentieth Conference*, 1945, pp. 73–76.

REORGANIZATION OF LIBRARIES

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THERE can be few libraries where the need for reorganization has not at some time been felt, and it is therefore a subject of very wide interest. The previous paper dealt with the planning of special library buildings, with their equipment, and administration—the present paper will deal with reorganization as applied to the stock of a library, and with the more usual aspects of that type of reorganization, namely recataloguing and reclassification. As would be expected, a fair amount has been written about the problem. Unfortunately, it is a matter in which so much depends on local conditions, on the scale of the operations, on what has gone before and what is to follow, and on the resources available, that it is difficult to give comprehensive practical advice. Most of the literature is therefore confined to generalities, and many of these, though arrived at by investigation of reorganization in a large number of libraries, might equally well have been reached by the use of common sense. This particular attribute has always had a very high value in special librarianship, and if, at the end, you are able to dismiss this paper as 'just common sense', then I shall feel that it has been a most useful contribution to the problem!

Before dealing with the question of how best to carry out a reorganization programme it will be of advantage to consider why reorganization usually becomes necessary. It is almost always due to some inadequacy in an existing system which has made it unable to cope with present-time conditions, and this arises from lack of foresight in the past. M. F. Tauber[46] attempted an evaluation of why reorganization was carried out in a number of different libraries, and found that the reasons fell into three broad classes: those concerning the system which is being discarded; those concerning the increasing difficulties caused for users; and those concerning the increasing difficulties of applying the old technical processes to new materials. These classes are not mutually exclusive and every library felt each type of trouble, though assigning varying degrees of importance to them. Closer consideration of Tauber's evidence shows, however, that there was one causative factor common to all cases—whether it were a change from ledger to card catalogue, from an old classification system to a new, or a modification of library routine—the reorganization was always made necessary by reason of a lack of flexibility in the old system. So, when one has decided that the present state of affairs can no longer continue and yet wishes to avoid the same mistakes in future, the best possible advice that can be given is to plan for maximum flexibility so that the new system shall not strangle itself prematurely. The present need for reorganization may not, of course, have arisen from culpable lack of foresight and its necessity need not be a reflection on previous work. It is impossible to foresee everything. There are, for example, many cases in which knowledge has extended rapidly in directions which a few years ago would have been considered impossible. The developments in psychology which have caused so much trouble to users of Dewey, the new synthetic fibres which (however desirable they are in other ways) are disrupting the textile section of the Universal Decimal Classification, and atomic energy, which has caused plenty of trouble in this as well as other ways, are just three which spring to mind, and there are many others. Yet how frequently a would-be maker of a new classification scheme packs his notation tightly, as if afraid that wide open spaces suggest lack of ideas. Allied to the danger of inflexibility is that of underestimation of future needs, which is one of the most common mistakes. R. H. Hopf[19] has said that nobody has yet made the mistake of overestimating the rate of growth of a library, and I am inclined to think he is right. He gives some evidence to show that at the present rate of growth university libraries will be likely to double their size in eighteen to twenty years, but even this may prove to be an underestimate unless such developments as micro-reproduction can offset to some extent the tendency to need ever-increasing space. F. L. Kent[26] stresses this point and shows that in the case of Birmingham University an increase of 50 per cent. took place in only four years, and if the present rate of intake is maintained in this library the stock will have been doubled in eight or nine years. Growth in size of libraries seems to follow compound interest, rather than simple interest, laws. No system of any kind should be put into operation, even when normal growth has been taken into consideration in its formulation, without the librarian asking himself the question, 'How would this work if it were ten times as big?', and being satisfied with the answer. In one case quoted (A. F. Wood[48]) trouble could have been avoided if this question had been posed, and it is typical of many cases. A dictionary catalogue, which had proved to be quite suitable while it remained small, on growth proved to be much too complex for the average undergraduate to use, and the only possible solution was to divide it into author and subject parts which could be used separately with more ease. It is very tempting to put everything into one complete and tidy sequence, but the balance between the convenience of finding everything in one place, and the inconvenience as size increases of having to find it amongst unwanted material, is soon disturbed in favour of separate special indexes. This is particularly so where many users congregate together and have to wait for places at the catalogue. Two interesting papers[12, 40] of opposite views on this question are well worth reading. This question of complexity is the basis of another mistake which is all too common—the assumption that to organize anything properly it must be made complicated, and that to reorganize efficiently means to increase complexity. How frequently, not only in libraries, but in industrial and government circles as well, one finds that reorganization brings with it an enormous increase of paper-work and red tape. In reorganization one should aim to reduce these rather than increase them. A simpler and easier-to-run scheme can always be worked into an existing library with less disturbance of normal running, and it will pay great dividends over the years. Never introduce any new scheme which is more trouble for readers to use than the old.

The magnitude of the process of reorganization is frequently stressed in the literature and also the ways in which it can grow into a larger job than at first appeared. H. D. MacPherson,[33] for example, points out that in dealing with 4,000 volumes in an American library, not only had the books themselves to be handled, but the work also involved removal, remarking and refiling of some 8,000 to 10,000 cards, and changing and refiling 4,000 shelf-list cards. Further, as Miss Wood[48] points out, any job which involves seeing every card in the catalogue presents an opportunity for internal adjustments and shows up previous errors. Frequent queries will arise, many of them requiring the attention of a senior, so that work is retarded considerably. Reclassification, if undertaken alone, will often show the need for recataloguing—and so the process may well go on! There is no doubt at all that reorganization is a major operation—not to be undertaken lightly. One has great sympathy with the librarian[42] who, having finally decided that the existing state of affairs was unworkable, and that reclassification could no longer be delayed, came across an old library report of 1888 in which he read the words of a predecessor who had faced the same task some years earlier: 'The work of reclassification is slow, requiring great care and special training, but when once accomplished it will be permanent and adjustable to any future growth of the library, however extensive!'

In fact the more one considers the matter the more evident it becomes that the best advice which can be given on reorganization is to avoid it at all costs—that is at any rate reorganization as the term is normally understood. In a special library particularly, one should avoid any idea of permanency in a system, and create a situation of such flexibility that development can take place currently without the need for major reorganization. Ease of adaptation should be the criterion of a good scheme—no special librarian will worry if his more orthodox librarian-critics think the term 'improvisation' more appropriate than 'adaptation', so long as quick reorientation of ideas can be accommodated. In a special library, reorganization should be part of the daily routine, not a course of action forced upon the library by pressure of circumstances.

This, however, is not an ideal world, and we are here to consider how best to carry out a major reorganization if it becomes inevitable. The following suggestions cover points which are not always applied, but which will be found of value:—

(1) Reorganization should not only be approached in a parochial sense. It presents an excellent opportunity to relate one's work to that of other nearby libraries—and there is no better time to review the possible introduction of such projects as Union cataloguing, subject specialization, or other forms of co-operative working. Local agreements on the matter of periodicals taken and filed are especially worthy of

attention, as periodicals are expensive, take up a good deal of space, and yet are vitally important sources of information.

(2) The extent of the work to be done should be limited as far as possible. It may be expedient to leave very old and comparatively little-needed material under an old system rather than waste time in bringing it into line with a new scheme. At the same time, material of intermediate age can be considered for relegation to a central store. Reclassification and recataloguing should only be carried out after a thorough weeding (which itself is a form of reorganization), and all material should have to justify its space on the shelves before extra work is put into it.

(3) The proposed work should be examined with a view to breaking it down, if possible, into more manageable proportions. There seems to be good evidence[45, 46] that the cost of reorganization is greater the larger the organization. This is in part due, of course, to the greater complexity of the work and the more detail generally used in cataloguing, but it does also suggest that there is much to be said for splitting up the work into as many small sections as possible in an attempt to reproduce the conditions of a smaller institution, and to make more efficient use of a limited number of senior staff. Older and less-wanted material can perhaps be left to a second stage and be dealt with more leisurely. It may be that the stock of the library can be divided into well-defined subject groups, which can be taken independently, or that reclassification can be carried out separately and be followed by recataloguing. Even if extra staff is employed the greater part of the responsible work of reorganization will have to be carried out by existing staff and fitted into their usual routine. This will suffer less if the task can be undertaken in more practicable stages.

(4) It has already been stressed that greater ease of future working should be sought after in devising new systems, but this can scarcely be over-emphasized. The fact that changes will very probably have to be made again later should be borne in mind, and the extent to which future time can be saved should be examined. This is important even in small things, as is noted by J. L. Hobbs,[18] who points out that some simple yet effective method of lettering which is easily changeable is needed for books. Book numbers applied with gold leaf, or even by electric stylus, are difficult to remove, and this gives permanency to something which should be thought of as essentially impermanent. He suggests a band of paint to hold the lettering. This method would probably be quite effective if a flat-white paint were used with washable ink markings, or even with pencil markings, and if necessary, some protection could be given by a light varnish coat which would not prevent repainting. Self-adhesive transparent tapes are easy to remove when required, yet adhere well as long as they do not have to withstand direct sunlight, and they provide a satisfactory holding material for paper labels. Bliss raises the question of class-marks and says 'The notation should be so marked on the books and cards that, where alteration or reclassifying becomes requisite the marks may be removed or erased with the minimum of trouble and expense, and with comparative neat-

ness', but unfortunately gives no practical suggestions. One of the important factors in choice of library equipment should be this aspect of easy introduction of variations, and reorganization provides a chance to avoid past mistakes. If new filing guides are being bought, for example, because the old lettering has to be changed, then select the new from amongst the types which provide slots for lettered slips of paper.

(5) In one respect published material on reorganization is extremely disappointing. One would have thought that many special items of equipment would have been invented and improvised to assist in the work, and to reduce the effort involved in the more tedious operations. In fact, few such devices are mentioned. J. L. Hobbs[18] refers to the use of an electric eraser in several American libraries, where it is found to provide a quick, easy, and neat way of changing class-marks on catalogue cards. At least one make is now available in this country, but the price (£7 10*s.* 0*d.*) precludes its purchase unless a lot of correcting work has to be done. The more recent models have a burnishing head to restore gloss to the abraded surface. L. J. Lee[28] describes a useful device which was constructed to help in moving a large catalogue. This was a gauge, rather resembling a shoe-fitting measure, and was used to mark off suitable lengths of catalogue cards for transfer to new, pre-labelled, drawers. F. S. Allen[1] refers to devices used in moving the library of the California Polytechnic Institute. Gadgets of this type save many times the time taken in their construction, and one would like to see more of them designed. Even a piece of string the length of a shelf can save time. No engineer would approach an 'x-off' job without investigating whether a jig could be made to speed up and lighten work, or whether motion study could simplify the operations, yet librarians seem cheerfully to undertake the same simple task, recurring many thousands of times, without thinking out how the work might be reduced by 'production line' technique. There is a considerable field for research here, so far almost unexplored.

(6) Finally, and probably most important, is the need for the minutest planning of reorganization operations, so that as few details as possible are left to be worked out on the job. Generous margins must always be allowed for things to go wrong, for duties taking longer than estimated, and to cope with additional work the need for which is only disclosed once the project is undertaken. A certain amount of experiment may be possible before a new scheme is started, but, just as a mass-production factory is particularly unsuited for development trials, so is a large library for experiment. Preliminary trials may well have to be carried out in a smaller unit in order to provide accurate information. Such conditions might be achieved in a departmental library attached to a larger organization. A most interesting account of how much can be done by intensive planning is given by L. J. Lee[28] in a description of the recent move of the Firestone Memorial Library, at Princeton. In this case a special handling committee was set up several months beforehand, and controlled experiments were made to forecast the timing of operations. Every detail was worked out so that properly-labelled batches of books arrived just at the right time for placement on already-adjusted

shelves with the correct allowance for future expansion predetermined. A wooden ramp was constructed, 325 ft. long, protected from sun and rain by a roofing-felt canopy, and along this moved 'trains' of bogies (hired from a store) carrying books. These trucks set off at five-minute intervals. Two loaders, eight men to push, and two to unload were provided and the round trip took 40 minutes. In this way, because of the careful planning, no less than 21,500 volumes were moved and correctly reshelved in the first day, between 8 a.m. and 4.30 p.m. Altogether 80,000 volumes were handled, together with many valuable museum specimens, in less than a week—a considerable achievement which makes an interesting story.

Another similarly interesting account of a library move is given by F. S. Allen.[1] The notable features of this move, besides careful planning, were the use of a fork lift truck fitted with a special platform to raise material to the library window on an upper floor, and the packing of all books in corrugated pasteboard cartons. As 10,000 of these cartons had been collected by canvassing stores in the town there was no need to empty them immediately on delivery. Part of the planning for this venture consisted of experimental runs with the truck, two weeks before the event.

Reclassification

As reclassification need only be undertaken when a former scheme proves unsuitable it would seem useful to examine a number of cases to see whether any particular factor tends to render a classification scheme more liable to break down. This subject was amongst those dealt with by M. F. Tauber[45, 46] but the investigation proved abortive in this respect as there was nothing to choose (as a creator of the need for reorganization) between the previous use of standard classification schemes and home-made ones. The former create trouble because they are inflexible, and because they are designed for general rather than special application. They rapidly become out of date, with the best places in their notation occupied by the most outmoded conceptions, and, worst of all, their authors and strongest exponents die and the schemes are left inadequately cared-for. Disagreement breaks out amongst users on the merits of proposed alterations, and unauthorized extensions begin to spring up. Ultimately librarians find they would rather start afresh with some totally new system than put up with the old any longer. On the other hand it is not at all easy to make a good classification scheme and the shortcomings of bad home-made ones have caused much trouble. In spite of this danger, however, there are many advantages of the homespun product and, at the risk of making myself a target for the exponents of the universal schemes, I would venture the opinion that *so far as special libraries are concerned* there is much less danger in use of one's own scheme—as a trouble-maker of this particular kind. It is tailor-made to particular conditions which in all probability are not duplicated elsewhere, and its natural development is always under personal control. It is natural that the controllers of a universal scheme should wish to protect users against too-frequent changes, especially such changes as radically alter the meaning of symbols, as it is impossible to estimate the amount of disruption such alterations may make in the orderly running of libraries. Consequently it is usual either not to admit the possibility of such changes, or to adopt some compromise such as the U.D.C. rule that meanings of symbols shall not be altered until they have remained fallow for ten years. The user of his own scheme has no such inhibitions, and can see the full effect of any change he proposes to make. Only in this way can sufficient degree of flexibility be attained to enable imperceptible development to take the place of periodic major reorganization.

In undertaking reclassification it is important to take readers into one's confidence completely and to explain carefully the reasons which have made the changes necessary, and the advantages which will accrue. This will justify the upheaval in normal working, and do much to mitigate the ill-feeling resulting when users have to unlearn one way of using the library, and learn another. A schedule should be prepared for the guidance of readers, showing at least how the main classes compare under the two schemes. In reclassification, particularly, the work will cause less disturbance of normal business if it can be broken into parts. This is one of the cases where the cost has been found to rise with the scale of the work so that dissection is advisable. It is obviously easy to break the classification scheme into smaller subject divisions, but what is not generally realized is that in reclassification, as in shooting a film, there is not the slightest need to keep to the order of the 'script', and, in fact, it is frequently more convenient to do otherwise. The most-used sections can be tackled first, and then those sections which approximately coincide in both the schemes and which will thus be easier to deal with. This selection of the most-used and quickest-to-deal-with material for first treatment will enable the change-over to be made with more apparent ease and will cause least trouble to users. This is particularly valuable as one should not close down the library services, or even reduce them, unless it is absolutely unavoidable. 'Business as usual in spite of alterations' is as good psychology in a library as it is in a large retail store. On the other hand it is so much easier if non-routine work can be carried out without interruptions that it is always worth looking around to see if there are other suitable libraries nearby which could temporarily carry out some of the services to readers, at any rate during these first stages of the work.

Recataloguing

This process cannot be entirely dissociated from reclassification for separate consideration, and much of what can be said about one applies to the other. Most cases of need for recataloguing arise from lack of elasticity in older methods, and a legacy of the inaccurate work of untrained staff. Now that standard rules have become stabilized, however, the need for complete recataloguing is much less likely to arise in future—at least there will be no excuse if it does. The main recommendations which can be made are those concerning small mechanical details. As in reclassification, it is desirable to use some device to indicate which material has already been dealt with, especially in a lending library where many books will not be available until their return. Some inconspicuous mark or stamp can be used in a book, or on the back of a card, or where new cards are inserted they can be of a slightly different tint. It is advisable to be fairly lavish with insertion of guide cards when recataloguing. This will give fuller assistance to readers while the system is new to them, and a return to the normal level of guiding can be allowed to take place automatically as new material brings additional cards to the catalogue.

It is unlikely that much help can be obtained from printed cards in recataloguing of older material. W. W. Bishop[6] found that only 15 per cent. of the cards he needed were available for the books in his library, though at that time (1934) 45 per cent. of the new material being received could have been provided with printed cards. J. T. Strickland[44] estimates that even nowadays no more than 75 per cent. of new material is covered by printed cards. If there is any value in the use of printed cards in recataloguing it is thus more likely to rest in its capability for relieving the problem of dealing with currently-arriving material, which will free the cataloguing staff from routine to some extent and enable them to spend a greater proportion of their time on recataloguing.

It is interesting to see how far modern processes can help in recataloguing. Microfilming by the 'Recordak' process provides a very quick way of reproducing standard sizes of originals such as catalogue cards, and it could be of inestimable value in a large library where space to re-build a new catalogue could not be found without destruction of the old. In such cases a section of the catalogue could be reproduced on film and be made available for use in a 'reader', the cards being removed from this section. The cost of materials and processing alone[27] would be a little under £1 per 1,000 cards (0.24*d.* per card) for 5 × 3 in. cards, and to this must be added a proportion of the cost of rental of the Recordak machine and projector (£72 for a minimum period of one year), and the time of a junior for operation. Speeds of 4,000 to 6,000 per hour are obtainable with documents 3 in. long. For small numbers of cards the rental of the machine might not be economical and in this case the entire work can be done commercially at a cost of £2 5*s.* 0*d.* per 1,000 5 × 3 in. cards (0.54*d.* per card).

In rebuilding a new catalogue need will arise for preparation of a number of sets of cards with similar wording for use as cross-references, or for use in the duplicate catalogues of departmental and head libraries. There are now several methods available for preparation of short runs of copies. Which process is used will probably depend to some extent on what type of equipment is already available in the organization, because equipment cost is high. The spirit duplicator method has been widely used and is comparatively inexpensive and very convenient for this purpose. Unfortunately the quality of copies is not uniformly good. An address-plate printing process is in use at Lambeth Public Libraries.[7, 8, 44] The capital cost of the machine used, an 'Adrema 3R', is considerable and the metal plates are rather expensive, but they can be used several times. An estimate of the cost of one year's working, in which 23,320 volumes were catalogued and 82,120 cards produced, showed figures as low as 3.51*d.* per card, a figure which includes overhead costs and staff salaries for the department. A partial disadvantage is the restricted area for typing (4 × 1⅝ in.) on the plates. This 'Adrema' method has proved so successful that it is now being used for Reference Library cataloguing in a way which represents an advance in technique. Mr. Callander[8] says: 'We work on the assumption that we can produce with minimum expenditure of time as many cards as we want for any book and have begun a catalogue which is in effect an extremely detailed subject index to our stock. We are printing in this catalogue three grades of card (distinguished by colour) to index under appropriate subject headings the principal topic of a book, substantial contributions to the literature on other subjects, and useful fragments of information, e.g. statistical tables, bibliography, etc. In many instances we are finding it worth while to use as many as sixty cards for a single book, and the resulting catalogue is already beginning to show our stock in a new and extremely profitable light.'

These two processes permit of printing single cards whereas the processes which follow depend for their success on suitable grouping of a number of cards of which the same number of copies are required.

At Dagenham J. G. O'Leary[38] uses the 'Gestetner' process for reproduction of cards for a joint cataloguing scheme, comprising eight complete author and eight complete classified catalogues. Entries, grouped according to the number of copies required, are cut on brief-size stencils for printing on 10 × 12 in. cards which are already punched. The cards are then divided into 5 × 3 in. size in the bookbinding shop.

At Coulsdon and Purley the 'Ditto' offset gelatine process is used to prepare slips for catalogues, but could be applied equally well to cards. Costs are given in a paper by K. W. Newbury,[37] which also gives valuable information on many other reproduction processes.

The 'Ozalid' diazo photographic process is used by H. Coblans[13] at the Unesco Library, in Paris, this process having been chosen because a machine was available in the Registry. Eight cards at once are typed on ordinary tracing paper, a more dense impression being obtained by backing with black carbon paper used face-upwards, and a positive 'Ozalid' print is made from this on board stock. The cost of the materials alone works out at about 3 francs per card. Mr. Coblans considers that a reproduction method is always superior to typing four or five cards, due to the time spent by high-grade staff in checking.

Reflex copying methods can also be used with a batch of ten or twelve cards at once, the cost of materials alone, using a paper negative and card positive, being in the region of 0.34*d.* per negative and 0.35*d.* per positive.

The 'Photostat' process is used by B. Karpel[24] at the Museum of Modern Art, New York. Few Library of Congress cards were available to cover the specialized field, and checking of typed cards in foreign languages was found to take up a great deal of time. A new 100 per cent. rag-stock photographic card is used and all cards requiring the same number of reproductions are sent in batches of one dozen to a commercial photoservice (Weiman and Lester, 106 E. 41 St., N.Y. 17). The present costs are 0.06 dollars per negative, 0.0675 per positive, 0.005 for trimming, punching and assorting in sets. If other libraries can be interested in this method of reproduction the company could reduce the costs as follows: at 10,000 cards per annum (total from *all* libraries) 0.06 per negative and 0.0625 per positive, *including* trimming, punching and sorting; at 50,000 cards per annum the price per positive would be reduced to 0.0575. It is claimed that erasures and typed corrections can easily be made on the rag-stock cards, and further that they can be cleaned with a damp cloth when soiled.

Continuous enlargements can be prepared from microfilm negatives, and this is practicable if sufficient work is available. To the costs (which have already been given) of microfilming, should be added a cost[27] of £8 6*s.* 8*d.* per 1,000 (2.0*d.* per card) for cards up to 6 × 4 in. in size. The prints would be supplied in a continuous roll which would require to be trimmed by junior labour. Commercial trimming costs are £2 per 1,000 (0.48*d.* per card).

As a final point, where reclassification and recataloguing are needed together, a chance is provided for introduction of one of the mechanical methods of sorting of information. They are, of course, outside the scope of this paper and a good deal of information is available elsewhere describing their use, but their introduction would always mean extensive reorganization. If one is in any case facing a considerable degree of change then such methods deserve careful evaluation in relation to the work of the library concerned.

Costs

It is extremely difficult to give anything except a very rough idea of the costs of reorganization operations and as the few figures available relate to American practice their use for comparison is complicated by present-day artifically-elevated exchange rates. The cost of full reclassification and recataloguing has been found to range between 23.4 to 53.1 cents per volume or even higher, and some helpful information is given in the papers of Wood,[48] Tauber,[45, 46] Lee,[28] Miller,[34, 35] and Jacobs.[21] Costs of ordinary cataloguing and classification also appear in the literature[3, 6, 10, 11, 14, 22, 23, 34, 35, 39, 41] and will help in price estimating. It is fairly easy to estimate the amount of materials which will be used, but the time which will be taken is more difficult to assess. Here experiment will be of value and may give some indication, not only of how long the work might take, but, just as important, what snags are likely to arise. Some economy might be effected by the use of a proportion of voluntary labour—as, for example, the vacation help of students of librarianship, or the assistance of one's own readers which will frequently be offered—but in general voluntary workers can only be trusted with the more mechanical tasks, and the supervision they need offsets their value considerably. One cannot look forward to giving more than a quarter of the work to unskilled labour. This applies also in some degree to extra staff even though they may be skilled. Their need for training in the precise methods used impairs their value considerably in the early stages. If at all possible it is preferable to work with existing staff unless the task is likely to take so long that new staff would be able to acclimatize themselves, and develop their true value. But, however willing his staff, the ultimate responsibility for any reorganization must rest with the librarian himself, and I hope that his task will be made lighter by the 'do's and don'ts' of this paper.

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Mr. Hanson asked what might be regarded as an optimum of space and wondered whether Miss Exley or Mr. Ashworth could give an idea of a reasonable balance between the cost of building and the ultimate need of a library. His own working idea had been to calculate the space required for a ten years' accumulation of periodicals plus a further ten years for stack room.

MR. AGARD EVANS, on the matter of space, suggested calculating on a basis of fifteen years of books, ten years' periodicals, ten years' pamphlets and ten years' stack room. He advocated the duplication in the main library of books located in outlying sections. In his experience the locking of a catalogue was too great a nuisance to be worth while.

While MR. HEWETSON agreed with Miss Exley that it would be pleasant to depart from the usual drab green colour of shelving, he was very much against painting steel to imitate wood. He suggested that shelving chosen should be capable of being easily dismantled. He disagreed with Miss Exley on the storing of paper beneath developing trays as splashing and drips would ruin the paper.

As an indication of the rate at which libraries grow, MR. WRIGHT recalled that in the early 1930s the library to which he was then attached was moved into a room half the size of the Wills Hall Common Room, and it was necessary to spread out the material as much as possible in order to make some kind of a display. By 1946 that room was completely filled, there was a stack room, also full, of the same size, and separate office accommodation. To allow further growth, plans had been approved for doubling this accommodation.

Mr. Wright had been advised that unless rotary dryers were kept in constant use trouble would be experienced with the blankets stretching through being left in one position. An alternative to the suction vacuum for ensuring proper contact when printing was a water-jacket which squeezed out the air. Small equipment using this principle was available which was cheap and quite satisfactory for copying documents and even thin periodicals and books.

DR. HASSALL thought that statistics regarding space were less important for what they taught a librarian than for the arguments they gave him in negotiating with his Committee. It was wise to press for as much space as the authorities could be persuaded to allocate.

MISS HARRISON considered Miss Exley's idea rather Utopian and asked whether it would be wise to accept any additional space offered, however inconvenient.

MR. SHARR mentioned that old houses could be made into quite attractive and efficient libraries if the joists were sound enough on the upper floors to take books in the centre as well as the edges of the floors. Steel shelving could be made to look well if it were integral with the room, e.g. if the steel were painted the same colour as the windows and doors. The top of the wall could be extended over the shelves so that the wall was flush with the front of the shelf.

DR. URQUHART said that Miss Exley had omitted the most important part of planning a library. It was essential first to appoint the right individual as librarian. He suggested that Aslib should hold a session on the strategy and tactics of special librarianship.

MR. UVAROV warned the new librarian against haste in reorganizing an existing system. The more stupid anything appeared, the more probable it was that a good reason existed for it. If it were essential to make any change, he strongly advised discussion with the users before the change was attempted.

While agreeing with Miss Exley that it was undesirable to become a dumping ground, MR. HIRST strongly recommended that the special librarian should become a dumping channel; in this way, even his own books, long written off as lost, were very often recovered, and other material, valuable for exchange, acquired. He disagreed with Mr. Agard Evans, in his experience borrowers could not be trusted to replace index cards. He mentioned the value of the British National Book Centre to special librarians.

MR. HEWETSON, while agreeing with Mr. Ashworth that the problems of each library were particular to it, thought there was a lot of common ground on which special librarians should have factual information. He pointed out that the tacking on of items to ensure flexibility could result in a very ragged system. He had found that transparent adhesive tape for shelf marking became dog-eared after a short period. He thought more use should be made of gadgets and would like an Aslib research committee to investigate this field and the problem of the mechanical production of cards and their cost.

DR. CAMPBELL was in favour of experiment, outside the accepted fundamentals of librarianship, and urged that no procedure be used or not used simply because it was used or not used elsewhere. Each library required its methods to be thought out afresh now and then, but established practices should not be changed without good reason.

MISS DRAKE thought that the standard methods of librarianship should be adhered to, particularly for the sake of the librarian's successor. The classifier should be capable of ensuring that the methods used gave efficient service for the particular field in which the research organization was working. She stressed the value of co-operation with the research staff.

MR. THOMPSON said that even in his library, the R.I.B.A., which should perhaps approach the ideal of library planning, mistakes had been made particularly from the point of view of staff accommodation, artificial lighting, and sound insulation.

MISS HARRISON found that using her own system tended to greater flexibility. She suggested that everything should be contained in the main index, special indexing could be achieved by the use of coloured cards or tabs.

MR. ARDERN was disappointed that no plans of special libraries had been shown with these papers. He personally had experienced no maintenance trouble with rotary dryers for photo-copying. He asked why Miss Exley had desired gas in the photo-copying room.

MR. DUMVILLE asked Mr. Ashworth whether he did not think a case could be made out for standard classifications within given industries. He thought that the idea of developing an individual classification according to one's needs might be dangerous. In his twenty years' experience as a librarian of Rowntree's Technical Library, he had proved the value of a standard classification.

Mr. Dumville thought that it was most desirable to have a locking device for the index cabinet, or at least to have the index cards filed with rods in order to discourage readers from taking them out of the drawers. Quite apart from the rods obviating the danger of cards being misplaced, they had an additional use in enabling a junior library assistant to file the cards 'on rod', thus permitting the cards to be let down into the drawers when checked by a senior assistant.

MISS GOSSET found it worthy of remark that years ago she had heard Dr. Bradford pleading for the U.D.C.; now the U.D.C. was taken for granted and people were pleading for new special classifications. She suggested that if special classifications were made they should be so designed as to fit into the main division of one of the standard classifications. She herself had no doubt that the U.D.C. was the most suitable one to use.

MR. SHARR stressed the importance of recording any changes made. The record should state the exact purpose of the process concerned, the old system, the new system, and the reason for the change.

MISS THOMERSON, referring to Mr. Ardern's plea for plans, said that she was arranging an exhibition for the Aslib winter meeting on 26th October, and she had experienced considerable difficulty in finding any plans of special libraries. She asked that any in existence should be forwarded to her.

MISS GAUNTLETT said that users of libraries were very conservative; after getting to know where to find material on their subject they resented changes. She suggested re-planning on a large rather than a small scale, so that the system adopted need not be interrupted for some considerable time.

MISS SCHAFER said that every industrial librarian had to make a personal judgment as to how far he would urge his company to develop the library service. A library, however efficient, with a large budget in relation to other factory services, was an inevitable target for retrenchment whenever times were difficult.

MR. ASHWORTH referred to two articles which had appeared since the material in his paper was collected; they were: (1) STEVENS, R. E., 'Summary of literature on the use made by research workers of university library catalogues'. *University of Illinois Library School. Occasional Papers*, No. 13 (August, 1950). This paper was worth inclusion in the bibliography as illustrating the type of enquiry which is worth making before any reorganization is undertaken. One should not change a system without first considering if the need it met still exists. Investigation may often prove that the people who use library systems do so in a way different from that which might be expected. (2) WRIGHT, J. E., 'Rearranging and recataloguing a reference library of books'. *Aslib Proceedings*, 2, 1, 26–32 (February, 1950). This paper was particularly good in that it illustrated many of the points stressed (preliminary weeding, prior planning), and the cost of recataloguing 8,000 books is given as £700. The paper was also interesting as a change was being made to an unusual form of catalogue, 'Stripdex'.

Several speakers had referred in the discussion on Miss Exley's paper to the difficulty of photographing tightly bound books on reflex copying equipment, and Mr. Ashworth described a simple device which he had designed to overcome this difficulty. It consists essentially of a thick sheet of plate-glass (approximately ⅜ in., to prevent flexing), with polished edges, which is supported about 2 in. above the plate-glass cover of the copying machine by wooden blocks. Dimensions of these blocks are not critical, 2 × 2 × 12 in. is convenient and the plate-glass should be about 1½–2 ft. long and 11 or 12 in. wide. Sensitized paper is put face upwards on the plate-glass and is covered by the page to be copied laid on it face down. The device enables considerable pressure to be applied by hand to the page being copied, yet leaves the remaining pages of the book, which normally would have to be bent back, completely free, and thus removes all pressure from the spine of the book, which is, of course, the most vulnerable part of its construction. The blocks should be painted white in order to reflect light evenly at the edges of the pages and should have thin felt stuck on their underside to prevent damage to the glass of the printer. In using the device the lid of the printing machine is, of course, left open and exposures do not need to be more than about 10 per cent. greater than normal.

Replying to the discussion, MISS EXLEY made a strong plea for more authority in special librarianship. She felt the example and experiments of the last 100 years must surely have resulted in good practice which might well be adapted to our special needs. Miss Exley strongly protested against the introduction of too many gadgets into special libraries and could remember one library which resembled very closely an Ideal Homes Kitchen. She was very much in favour of library staffs handling the material in the library again and again, as by this means it was impressed upon them just what resources were at their command. Miss Exley said it was difficult to give general guidance on the amount of space required for a library. Figures for space per reader, number of books per shelf, width of gangways, etc., Miss Exley suggested, were already available in textbooks. The problem was rather more closely linked up with the future terms of reference of the library. The librarian should take into account the number of journals permanently filed, the possible increase in the number of such journals, the possibility of new subject interests, etc. Miss Exley was amazed to find Mr. Agard Evans admitting he had never seen a tilted tray and suggested builders must be far more honest than medical men and scientists if they could be trusted with unlocked cards.

She informed Mr. Wright that a suitable book-holder was on sale for use in contact copying, and advised Miss Harrison to accept any space offered provided it could, without undue expense, be adapted to incorporate the fundamental requirements of a library. Whether to agree to the library being in a different building to the research workers depended a great deal on the exact distance from the research workers. Ideally they should be adjacent to the library. In reply to Mr. Ardern, Miss Exley said gas was laid into the photo-copying room as it had been proved a better and more economical way of heating the rotary dryer. She could not support Mr. Dumville's method of filing cards as she considered it was too expensive on stock, and she deplored Miss Schafer's tendency to 'sell' things to the management, preferring to give to the management first what they wanted, educating them to these needs if necessary.

THE LITERATURE OF SPECIAL LIBRARIANSHIP

By E. M. R. Ditmas, M.A.

Introduction

AT the very outset of this paper it is necessary to make clear that it is not an attempt to compile an exhaustive bibliography of literature relating to special librarianship. Neither space nor time permit this. In fact, the references given can only claim to be a sample of the wealth of material on the subject and this paper is submitted in the hope that it will stimulate others to more scholarly efforts. Reference numbers throughout this paper refer to items in the 'Select list of references to the literature of special librarianship', section 2 onwards.

If endless digressions and controversies are to be avoided the term 'special librarianship', as used in connection with this paper, should first be agreed. A useful description of a 'special library' is that given by Linda H. Morley in her *Contributions toward a special library glossary*,[257] from which the following extract is taken :—

> 'A service organized to make available whatever experience and knowledge will further the specific activities of a particular organization or limited group, all members of which have a common objective ; requiring on the part of the library staff familiarity with the activities of the clientele and knowledge in the field of specialization, as well as of library policies and techniques. Its primary functions are : (1) to maintain a continuing survey and evaluation of current publications, research in progress, and activities of individual authorities, on behalf of its clientele ; (2) to organize the sources of both written and unwritten experience and knowledge from the specialist viewpoint ; (3) to assemble from within and without the library both publications and information as required by the activities of its clientele, disseminating these on the initiative of the library as well as on request, often in abstract or memorandum form oriented for immediate application to any individual's work.'

Miss Morley goes on to distinguish 'the special organization library' from

> 'the "special branch" of a public library serving certain occupational groups'

and from

> ' "the special subject library" which may be a semi-public, independent or departmental library, serving students, professional groups, members or general public, on a given subject'.

This paper is primarily concerned with librarianship considered in relation to the first of Miss Morley's subdivisions of special libraries, though it will also touch on the third. No attempt is made to cover the special library services organized by public libraries for particular groups of clientele, or the reference and information sections of public libraries.

In considering this question of the nature of special librarianship, it is helpful to read Dr. Ranganathan's article, 'Special librarianship—what it connotes'.[271] He points out that :—

> 'The thought-unit of operation may be as large as the one embodied in a whole book or as small as the one embodied in an article in a periodical or a pamphlet.

> The techniques which librarianship first forged were determined by the larger thought-unit embodied in books. . . . The techniques of circulation, classification, cataloging and reference service have to be changed if the thought-unit is changed.'

Dr. Ranganathan sums up the changes which have led to the emergence of 'special librarianship' in the last 100 years by stating :—

> 'In my opinion, it is the new techniques of classification, cataloging, circulation work and reference service, necessitated by the contraction of the thought-unit in use, that connote *special librarianship.*'

The French use the word *documentation* to cover these techniques, but the present writer has preferred, for the purpose of this paper, to retain the term *special librarianship*, since it is the work of the librarian in the special library that is under consideration rather than that of the technical intelligence or information officer, and the word *documentation* is often loosely used to cover both.

This preamble will make clear that the literature of special librarianship will be, in certain fundamentals, the same as that of general librarianship. It is not therefore proposed to duplicate the reading lists published by the Library Association. Literature relating to hospital, school and children's libraries is not included.

Scattering of material

Because of the fact that there are few manuals on library administration which help just at the points where special librarianship becomes 'special', the literature is scattered over a wide field. Detailed treatment of such matters as the methods of dealing with periodical and pamphlet material, the compilation and maintenance (including weeding) of current information files, and the organization of abstracts and technical information bulletins, is more likely to be found in periodical literature.

There are, of course, a very great number of books on library administration which can be read with advantage by the special librarian in spite of a bias towards public library practice which is to be found in some of them. No one should overlook the 'Graded list of text-books and works of reference' to be found in the Library Association's *Year Book*, a list which has been much expanded in the 1950 edition. In a few cases, however, titles may be misleading at first sight. Thus *Special librarianship in general libraries and other papers*, by Ernest A. Savage (1939), is not included in the list at the end of this paper, since it treats primarily the development of subject librarianship in general libraries and not of librarianship in special libraries as we defined them at the outset. Similarly *Information Services : their organizations and administration*, by R. L. Collison (1950), is chiefly concerned with the information services of the general library.

From what has been said it will be realized that the literature of special librarianship must contain a high proportion of articles in periodicals, many of which are not specifically library periodicals. (No one who is interested in the development of the application of punched card techniques to information work should overlook the *Journal of Chemical*

Education.) A selection of titles of periodicals which the writer has found to be rich in material of special librarianship is given in section 1 of the 'Select list', page 224.

It will be noted that the references given are mainly to publications since 1939. There is, of course, a wealth of valuable material to be found in the earlier issues, particularly in those journals published by pioneering bodies such as the International Federation for Documentation, the British Society for International Bibliography, the Special Libraries Association, and Aslib. No one who wants to make a real study of the subject can afford to ignore this, but, because space is limited, many important articles have had to be omitted. Moreover, in some subjects such as document reproduction, mechanization applied to libraries, and alternative methods of publishing, progress since 1939 has been so rapid that it is the later material that is of the greatest practical value. For a historical survey of the subject, Murra's *Notes on the development of the concept of current complete national bibliography*[87] should be read—both this and the writer's two articles on documentation[83, 84] have references to further relevant material.

Directories

Section 2 of the 'Select list' covers a number of directories and guides to sources of information. The article by Duyvis[4] describes seventeen directories which were in existence in 1938 and has a table showing the number of entries, the type of detail given, etc. In those cases where later editions have been printed of the publications mentioned by him, further particulars are given as separate entries. It should be noted that the directories include those covering information bureaux and documentation centres as well as special libraries. An information or documentation centre need not, in all cases, have a library but most have, and since the directories have been compiled to list sources of information, which may be found in any one of the three forms of organization, it has not been practical to make any distinction.

Types of special libraries

This section has been divided into four broad subdivisions: (*a*) Government and State-aided libraries; (*b*) Libraries in commercial or industrial concerns; (*c*) Libraries of learned societies, professional institutions, etc.; and (*d*) University and college libraries.

Scientific information services and their libraries sponsored by the State developed rapidly during and since the 1939–45 war, and in connection with these much valuable information can be obtained from the reports of the Royal Society's conferences held in 1946 and 1948.[20, 28, 29] Any examination of such literature will quickly show the key position of the Department of Scientific and Industrial Research[17] and of the Industrial Research Associations linked with it[23] as sources of information for the special librarian in science or technology.

The value of libraries as part of the organization of industrial and commercial concerns was realized more quickly in the U.S.A. than in Britain. It is, however, interesting to note that a short description by H. V. Garrett, of the technical library at Rowntree & Company, York, appeared in the *Report of Proceedings of the First Conference* of Aslib in 1924. In recent years the development of industrial and commercial libraries has been widespread and rapid, and in 1946 Dr. Percy Dunsheath could say, 'Every research laboratory must have a library which can profitably become the centre of technical information for the whole organization.'[35]

Both the libraries of professional societies and institutions and of universities and colleges have their own particular problems. In the case of the latter, one of the most frequently debated is the conflict between the development of special collections serving the various faculties and the attempt to integrate the university library resources as a whole. A recent contribution to this problem will be found in the papers presented at the international gathering of university librarians which was held at Liége in October, 1949.[45]

The functions of special libraries

Under this heading are grouped publications dealing with the services which may be expected from the special library. These include some written from the users' point of view, which should never be forgotten when planning the scope of a library service. In this section are also placed two papers on budgets and finance.[58, 66]

Buildings and equipment

In so far as basic necessities are concerned, such as shelving, catalogue and index cards, filing cabinets, etc., most library manuals give information, but the layout of a special library, which does not normally have to cater for the general public, will naturally differ in some respects from the public library. The Aslib meeting on the planning and equipment of special libraries, held in 1946, dealt with many of these special points.[74] With this report should be read an earlier paper by Mr. Carter.[63]

For those who are in the fortunate position of being allowed some say in the planning of new premises which are to be built specifically for library purposes, a few references to developments in the modular system of construction have been included.[70, 72] The special librarian is, however, more frequently allotted certain rooms which he has to use to the best advantage. In such cases Campbell and Goodwin's article would be useful, since it lists a number of details which should be checked before planning is completed.[67]

Library administration and methods

The first, general, sub-section under this heading covers a mixture of material dealing with special library practice as a whole. It includes some references to 'historical' surveys of the development of documentation which, in their turn, contain bibliographies which would be useful to those wishing to explore this aspect more thoroughly.[83, 87] Here also are listed those few manuals on special librarianship, as such, which are so far known to the writer.[88, 89, 90; 92] The *Unit librarian's guide*[79] and Harrison's *First steps in librarianship*[85] have been included for the sake of those unfortunates who have been thrust into the charge of a library without the chance of previous training. Miss Johnson's *Special library practice*[86] serves as a useful signpost to methods at present in use in special libraries in Great Britain, France, Canada and the United States.

The selection of material for the special library is a highly technical matter and needs an expert knowledge of the interests which the library is designed to serve. Since these interests will differ in each individual case there can be little that can be written as a guide for the librarian, though references to some general aids will be found in section 11.

The routine work of accessioning and cataloguing should follow standard procedure, always remembering that the chief need is to provide records through which any particular item can be identified without shadow of doubt. Some of the ultimate refinements of cataloguing technique may sometimes have to be sacrificed in order to speed up procedure. (The special librarian is nearly always between the Scylla of the necessity for up-to-the-minute records and the Charybdis of understaffing which tempts him to simplify procedure beyond the safety point for future consultation.) If, in order to meet special circumstances, departures from orthodox library practice have to be made, it is a wise plan to have such deviations carefully coded in a staff manual. This helps to preserve consistency in the records and also discourages unnecessary irregularities. Examples of this type of record for use in a particular library are the *Cataloguing rules used in the library of the Scott Polar Research Institute*, 1950, and the *Footnote references and bibliographies v. lists of books: rules for preparing MSS for the Press*, drawn up by the Editorial Department of the Royal Institute of International Affairs in 1949 to ensure consistency within the organization.

In the cataloguing sub-section references to a number of schemes of subject headings have been included.

With classification we come to one of the special librarian's major preoccupations and here one can only repeat the warning that although, at a first glance, almost every special librarian is apt to say that no ready-made classification will fit his particular collection of material, a home-made classification is nearly always the slowest way to achieve efficiency. The special librarian should, therefore, make careful notes of the systems used in established libraries covering similar subject fields and should also take into account any systems that may be in use by international abstracting or documentation services in that subject. It is nearly always possible to use one of the recognized systems as a basis, with special expansions, clearly defined and limited, for use in the library for those sections which, owing to a concentration of interest at those particular points, need very detailed treatment.

The literature of the Universal Decimal Classification could, of course, have a paper to itself, and those who wish to study it in detail should read the publications of the International Federation for Documentation, the British Society for International Bibliography, and the Association Belge de Documentation. Dr. S. C. Bradford's book, *Documentation*,[107] gives a very good general picture for British readers and references to some other notable contributions are included in section 6 (*c*).

The special librarian's choice of a system of classification will be influenced by the degree of indexing of articles in periodicals, of reports, pamphlets, and unpublished information—including correspondence—which is to be carried out in the library. The maintenance of up-to-date information files and their periodical weeding, the treatment of press cuttings, and of confidential material, are other problems of library routine of first importance to the special librarian. Some suggestions as to reading matter on these subjects is given in section 6 (*d*).

Handling of periodicals

In any special library periodicals are likely to be a very important part of the collection. The librarian will be faced with such problems as whether to loan them or to retain them in the library for consultation there only. If loans are permitted, he will have to decide whether to send them out on request only or circulate them regularly to a rota of chosen readers.[154, 158] Circulation problems are often closely linked with the routine of preparing abstracts or news bulletins within the organization.

In addition to the handling of periodicals received and held by the library, there will also be the question of obtaining them on loan from other sources. This necessitates an intimate knowledge of the inter-library loan systems in operation in the country,[155, 156, 160] but it may well happen that for something urgently required the use of the national network may prove too slow. It is then that the special librarian needs to know the most likely source from which he can borrow the material at short notice, frequently from some other highly specialized 'closed' library by virtue of his personal contacts with the other librarian. This is the reason why most special librarians treasure lists of holdings of periodicals in other special libraries in their own field and make constant use of such tools as the *World List*[188] or the *Hand list of short titles of current periodicals in the Science Library*.[176]

In this matter of tracing and borrowing material the librarian will have constantly to check inadequate or inaccurate references, particularly in the case of foreign titles. Here, lists of periodicals published in various countries can be of considerable use, and a number of these are included in section 6 (*f*). Where the reference has been reduced to unintelligible initials, recourse to Ake Davidsson's pamphlet will often help.[165]

Where a loan copy of a publication cannot be found, the special librarian may have to call in the auxiliary service of document reproduction—references to this will be found in section 7.

Document reproduction

Since the possibility of using microfilm for the copying of documents is now familiar to most librarians, the references given are to a few standard reference books and to articles dealing with comparatively recent developments in microphotography and other forms of reproduction. Thus the special librarian should give serious consideration to the question whether flat film,[219] now beginning to be used in Germany, France and the Netherlands, may not suit his purpose better than 35 mm. roll film. In any case, ability to take varying forms of microfilm is an important point to be looked for when purchasing a viewer. The special librarian should also be aware of the new copying devices which can be operated in the library with relatively unskilled labour, as well as of revolutionary new processes, such as Xerography,[215, 216] which are at present in an early stage of development. Where saving of space is the primary objective, he should know of the micro editions of certain publications now being issued by the Microcard Foundation in Middletown, Conn,[212] and by the Readex Microprint Corporation at Chester, Vermont, U.S.A.[206]

Mechanization in libraries

Because the special librarian is seldom provided with sufficient staff to be able to produce without effort all those results expected of him, it is wise for him to take note of new mechanical aids for such matters as the production of multiple copies of catalogue cards or the selection of material dealing with very minutely specialized aspects of research. A selection of references is given in section 8. For those who are interested in the far horizons opened out by new scientific development, Vannevar Bush's famous article should be read.[227]

Preparation of technical bulletins, abstracting journals, etc.

It may very well happen that the special librarian is responsible for organizing the preparation of an abstracting or technical information bulletin. Even when he does not undertake the actual task of abstracting—which is work for subject specialists—he should know the principles of good abstracting. Some references to this technique have been given in section 9.[244, 245] Many librarians find themselves acting as editors of information bulletins intended for circulation within the organization which they serve. Questions of format, layout, production, will arise and knowledge of the standard forms of abbreviations, bibliographical references, etc., will be necessary. These, too, are included in section 9.

Training for special librarianship

Having considered types of special libraries and the scope of their functions, we come to the thorny question of training for special librarianship. Anyone who has attended Aslib conferences will know that this is a problem that has been debated for years and that the literature is extensive. In this paper, however, the selection of references is deliberately restricted to cut out the more controversial material and papers on the training of the information or intelligence officer—as distinct from the librarian—are not included.

Reference books

The last section of the list is devoted to reference books and to their use. In this connection the Library Association's *Year Book* should again be remembered.

Conclusion

The writing of this paper and the compilation of the list has emphasized the great need for a more comprehensive treatment of the subject. Almost each section could have been expanded to the length of the present whole but, for the purposes of a paper suitable for a conference, a strict limitation on the size of the selection had to be made. The present list of approximately 300 items represents about 10 per cent. of the material now held in the Aslib collection and would be a still smaller percentage if the pre-1930 material were to be taken fully into account. There is, moreover, still much valuable material on special librarianship in the fields of medicine, social sciences and humanities which Aslib has not yet collected and which is, therefore, inadequately represented in this selection. In the circumstances the present list can only be put forward as a personal choice and as such is open to all the criticism that such arbitary treatment invites. It has been made in the hope that it may be of some help to the newcomer in the field. The writer would be very grateful if details of additional titles of important material could be sent to Aslib in the hope that, some day, a revised list, based on the collective experience of the membership, may be published.

SELECT LIST OF REFERENCES TO THE LITERATURE OF SPECIAL LIBRARIANSHIP

1. PERIODICAL LITERATURE

(*a*) *Periodicals published by organizations interested in international documentation*

[1] *A.B.C.D.,* Archives, Bibliothèques, Collections, Documentation. (Union Française des Organismes de Documentation et d'autres organizations, 65, rue de Richelieu, Paris, 2e) : quarterly (vol. 1, 1950).

*[2] *American Documentation.* (American Documentation Institute, Science Service Building, 1719, N. Street, N.W., Washington, D C., U.S.A.) : quarterly (vol. 1, 1950).

[3] *Bulletin d'Information Scientific et Technique.* (Association pour l'Utilisation et la Diffusion de la Documentation, 18, Av. de Villars, Paris, 7e, France) : monthly (vol. 1, 1950).

[4] *Les Cahiers de la Documentation.* (Association Belge de Documentation, 3, rue du Maelbeek, Brussels, 4, Belgium) : monthly (vol. 1, 1947).

[5] *Dokumentace a desetinné trídení.* (Ceskoslovenska Dokumentacni Spolecnost, Klementinum, Praha I, Czechoslovakia) : monthly (vol. 1, 1949).

*[6] *The Journal of Documentation.* (Aslib, 4, Palace Gate, London, W.8) : quarterly (vol. 1, 1945).

*[7] *Nachrichten fur Dokumentation.* (Deutsche Gesellschaft fur Dokumentation; Westendstrasse 47, Frankfurt/Main, Germany) : quarterly (vol. 1, 1950).

*[8] *Nouvelles de l'Association des Bibliothécaires Suisses et de l'Association Suisses de Documentation.* (Bibliothèque Nationale, Berne, Switzerland) : bi-monthly (vol. 1, 1925).

*[9] *Review of Documentation* (formerly *I.I.D. Communicationes,* then *F.I.D. Communicationes*). (International Federation for Documentation, Willem Witsenplein 6, The Hague, Netherlands) : (vol. 1, 1934).

[10] *Tidskrift for Dokumentation.* (Tekniska Litteratursallskapet, Box 5073, Stockholm, Sweden) : bi-monthly (vol. 1, 1945).

*11 *Tijdschrift voor Efficientie en Documentatie.* (Nederlands Instituut voor Documentatie en Registratuur en andere instituten, Willem Witsenplein 6, The Hague, Netherlands): monthly (vol. 1, 1931).

12 *Unesco Bulletin for Libraries.* (Unesco, 19, Av. Kleber, Paris, 16e, France): monthly (vol. 1, 1947).

(*b*) *Periodicals frequently publishing special library material*

13 *Abgila.* Annals, Bulletin, Granthalaya of the Indian Library Association. (Indian Library Association, Delhi, India): quarterly (vol. 1, 1949).

14 *Aslib Proceedings* (incorporating *Reports of Proceedings of Conferences* and *Proceedings of the British Society for International Bibliography*). (Aslib, London): quarterly (vol. 1, 1949).

15 *College and Research Libraries.* (Association of College and Reference Libraries, Chicago, U.S.A.): quarterly (vol. 1, 1940).

16 *Indian Archives.* (National Archives of India, New Delhi, India): quarterly (vol. 1, 1947).

17 *Information.* (Association of Special Libraries and Information Services, Melbourne, Australia): bi-annual (vol. 1, 1947).

18 *Proceedings of the British Society for International Bibliography, London.* (vol. 1–9, 1939–47). (Now merged in *Aslib Proceedings.*)

19 *South African Libraries.* (South African Library Association, Johannesburg, S. Africa): quarterly (vol. 1, 1933).

20 *Special Libraries.* (Special Libraries Association, New York, U.S.A.): monthly (vol. 1, 1910).

(*c*) *Periodicals sometimes publishing special library material*

21 *Archives.* (British Records Association, London): bi-annual (vol. 1, 1949).

22 *Indian Librarian.* (Simla, India): quarterly (vol. 1, 1946).

23 *Library Association Record.* (Library Association, London): monthly (vol. 1, 1899).

24 *Library Journal.* (New York, U.S.A.): monthly (vol. 1, 1876).

25 *Library Quarterly.* (Chicago, U.S.A.): quarterly (vol. 1, 1931).

26 *Library Review.* (Glasgow, Scotland): quarterly (vol. 1, 1927).

27 *Wilson Library Bulletin.* (New York, U.S.A.): monthly (vol. 1, 1914).

NOTE.—There are, of course, numerous other periodicals in which material of interest to special librarians will be found—the references in subsequent sections demonstrate this clearly. The above selection only represents those periodicals which should, at least, be watched systematically.

Library literature is indexed or abstracted in the following publications and in the periodicals marked with an asterisk in the preceding list.

Library Literature, New York, H. W. Wilson Company: annual.

Library Science Abstracts, London, Library Association: quarterly.

Year's work in librarianship, London, Library Association: annual.

2. DIRECTORIES AND INFORMATION ON SOURCES OF INFORMATION

1 ASLIB Guides to Sources of Information in Great Britain. No. 1, The Paper Industry, 1948. No. 2, Agriculture and Allied Interests, 1949. No. 3, Beverages and Food, 1949. No. 4, Textiles and Allied Interests, 1949.

2 BARWICK, G. F., *ed.* Aslib Directory: Guide to Sources of Information in Great Britain and Ireland, Oxford University Press, 1928, pp. 425 o.p.

3 BESTERMAN, THEODORE, *comp.* British Sources of reference and information: A guide to societies, works of reference and libraries. London, published for the British Council by Aslib, 1947, pp. 56.

4 DUYVIS, F. DONKER. Directories of documentation centres. *Report of Proceedings of the 15th (Aslib) Conference*, 1938, pp. 84–95.

Lists the principal guides and directories at that date.

[5] GASELEE, Sir STEPHEN. Libraries and sources of information in government departments. *Report of Proceedings of the 12th (Aslib) Conference*, 1935, pp. 53–69, 102.

[6] GRADY, CATHARINE C., *ed.* Directory of libraries and information sources in Philadelphia and vicinity. 7th edition. Philadelphia, Special Libraries Council of Philadelphia and Vicinity, 1947, pp. 125.

[7] Guide de la Documentation Suisse. 2nd edition. Zurich, Association Suisse de Documentation, 1946, pp. 80.

[8] HAUSDORFER, WALTER. Handbook of commercial, financial and information services. New York, Special Libraries Association, 1944, pp. 207.

[9] IRWIN, RAYMOND, *ed.* The Libraries of London. Seventeen lectures delivered at the University of London School of Librarianship in April, 1948. London, Library Association, 1949, pp. 234.

The bibliography, pp. 219–24, supplies a large number of additional references.

[10] LE FANU, W. R. A list of medical libraries and information bureaux in the British Isles. *Journal of Documentation*, vol. 2, no. 3. December, 1946, pp. 119–46. Also reprint.

[11] Library and reference facilities in the area of the District of Columbia. 2nd edition. Washington, D.C., Library of Congress, Reference Department, 1946, pp. 135. Mimeographed.

[12] NEWCOMBE, L. The university and college libraries of Great Britain and Ireland: a guide to the material available for the research student. London, Bumpus, 1927.

[13] Répertoire des organismes de documentation (région parisienne). Paris, La Documentation Française, 1948, pp. 112.

[14] SHAW, H. K. AIRY. Directory of natural history societies. London, Amateur Entomologists Society, 1948, pamphlet no. 7, pp. 155. First supplement, 1949, pp. 44.

[15] SPRATT, H. PHILIP. Libraries for scientific research in Europe and America. London, Grafton & Co., 1936, pp. 227.

[16] VORMELKER, ROSE L., *ed.* Special library resources. New York, Special Libraries Association, 4 vols., 1941–47.

Contains particulars of approximately 2,400 libraries in the United States and Canada.

3. TYPES OF SPECIAL LIBRARIES

(*a*) *Government and State-aided libraries*

[17] BROWN, O. F. The Department of Scientific and Industrial Research: its organization and duties. *Journal of Documentation*, vol. 2, no. 4, March, 1947, pp. 195–209.

[18] CHADWICK, Sir DAVID. Dissemination of scientific information among research workers and departments. Royal Society Empire Scientific Conference, 1946. Report, vol. 1, pp. 760–4.

See also No. 31.

[19] CLAPP, VERNER W. The Library of Congress and the other scholarly libraries of the nation. *College and Research Libraries*, vol. 9, no. 2, April, 1948, pp. 116–25.

[20] EGERTON, Sir ALFRED. Scientific information services. (In two parts.) *Food Manufacture*, vol. 24, nos. 7 and 8, July and August, 1949, pp. 307–8, 353–6.

[21] EVANS, B. AGARD. The regional libraries of the Ministry of Works. *Library Association Record*, vol. 50, no. 12, December, 1948, pp. 331–3.

[22] GOSSET, M. The library of the Atomic Energy Research Establishment. *Aslib Proceedings*, vol. 1, no. 3, November, 1949, pp. 218–24.

[23] HETHERINGTON, A. L. Relationship of Research Associations to the Department of Scientific and Industrial Research. London, British Coal Utilization Research Association, 1943, pp. 10.

[24] KNIGHT, DORIS. Collecting information for the dairy research worker. *Proceedings of the British Society for International Bibliography*, vol. 2, pt. 3, October, 1940, pp. 41–7.

[25] MACLEISH, ARCHIBALD. The reorganization of the Library of Congress, 1939–44. *The Library Quarterly*, vol. 14, no. 4, October, 1944, pp. 277–315.

[26] MARTIN, D. C. The work of the Information Services Committee of the Royal Society. *Aslib Proceedings*, vol. 2, no. 3, August, 1950, pp. 117–25.

27 Ower, E. The library of the British Shipbuilding Research Association. *Aslib Proceedings*, vol. 1, no. 3, November, 1949, pp. 225–30.

28 Royal Society Empire Scientific Conference. June–July, 1946. *Report.* London, Royal Society, 1948, 2 vols., pp. 828 and 707.

29 Royal Society Scientific Information Conference. 21 June–2 July, 1948. *Report and papers submitted.* London, Royal Society, 1948, pp. 723.

30 Shaw, Ralph R. The Department of Agriculture and its services. *College and Research Libraries*, vol. 9, no. 2, April, 1948, pp. 133–5.

31 Sheppard, Robert Lewis. The Bureaux' system of abstracting and information services, with particular reference to the Bureau of Hygiene and Tropical Diseases. *Proceedings of the British Society for International Bibliography*, vol. 5, pt. 4, October, 1943, pp. 83–90.

32 Wright, J. E. The special library and information bureau of the Post Office Engineering Department. *Proceedings of the British Society for International Bibliography*, vol. 1, pt. 1, March, 1939, pp. 1–9.

See also nos. 81, 266.

(*b*) *Libraries in commercial and industrial concerns*

33 Arnold, D. V. Routine in a library devoted to the literature of paint technology and related subjects. *Library Association Record*, vol. 49, no. 10, October, 1947, pp. 242–7.

34 Brown, Alberta L. The organization and administration of a pharmaceutical library. *Special Libraries*, vol. 39, no. 9, November, 1948, pp. 303–8.

35 Dunsheath, P. The firm with a research department. In *Industry and Research : the full report of a two-day conference arranged by the Federation of British Industries and held at the Kingsway Hall, London, W.C.2, March 27 and 28, 1946.* London, Sir Isaac Pitman & Sons, 1946, pp. 106–13.

36 Gibson, S. W. The library and information department of a large engineering firm. *Proceedings of the British Society for International Bibliography*, vol. 6, pt. 3, 1944, pp. 1–20.

37 Griffith, R. H. The practice of research in the chemical industries. Oxford University Press, 1949, pp. 184. Chapter 5, Library research. Chapter 10, Records and publications.

38 Shaw, Marion. Documentation in an industrial laboratory. *Proceedings of the British Society for International Bibliography*, vol. 4, pt. 1, 1942, pp. 1–11.

39 Shires, Geoffrey A. Technical information service in the rubber industry. *Transactions of the Institution of the Rubber Industry*, vol. 24, no. 3, 1948, pp. 120–37.

See also nos. 55, 57, 60, 64, 158.

(*c*) *Libraries of learned societies, professional institutions, etc.*

40 Handy, Daniel N. The creation and development of an insurance library, 2nd revised edition, New York, Special Libraries Association, 1941, pp. 44.

41 Nicol, T. S. The professional societies' contribution : the library of the North East Coast Institution. *Aslib Proceedings*, vol. 2, no. 2, May, 1950, pp. 71–5.

42 Pendleton, O. W. Insurance libraries. *Journal of Documentation*, vol. 3, no. 4, March, 1948, pp. 232–49.

43 Thomas, P. W. The problems of the technical society library. *Aslib Proceedings*, vol. 2, no. 2, May, 1950, pp. 91–2.

44 Watts, W. C. An introduction to the library and information services of a professional institution. *Aslib Proceedings*, vol. 2, no. 3, August, 1950, pp. 105–7.

(*d*) *University and college libraries*

45 Bibliotheca Universitatis Leodiensis. Journées d'Etude organisées par la Bibliothèque de l'Université de Liége (24–27 Octobre, 1949). Les problèmes de la documentation dans les bibliothèques universitaires. Liége, Association des Amis de l'Université de Liége, 1950. Melanges de bibliothéconomie et de bibliographie, no. 2, pp. 170.

[46] Bushnell, George H. A university library in action. *Library Review*, no. 93, Spring, 1950, pp. 280–4.

[47] Coblans, Herbert. Some problems of a multi-centred library. *South African Libraries*, vol. 17, no. 1, July, 1949, pp. 35–40.

[48] Fleming, Thomas P., Estelle Brodman and Seymour Robb. A continuous bibliographic service in university libraries. *College and Research Libraries*, vol. 8, no. 3, pt. II, July, 1947, pp. 322–8.

[49] François, Esseiva. Les bibliothèques des séminaires universitaires de Fribourg. *Nouvelles ABS and ASD*, vol. 24, no. 2, March–April, 1948, pp. 25–9.

[50] Kent, F. L. The University of Bristol Library. *Journal of Documentation*, vol. 5, no. 3, December, 1949, pp. 131–5.

[51] Newcombe, Luxmoore. The accessibility of British university thesis literature. *Report of Proceedings of 16th (Aslib) Conference*, 1939, pp. 21–30.

[52] Sevensma, T. P. Le problème des bibliotheques de facultés à Amsterdam et à la Haye. *Nouvelles ABS and ASD*, vol. 24, no. 1, January–February, 1948, pp. 3–11.

4. The Functions of Special Libraries

[53] Barber, William S. How to tell your story to management. *Special Libraries*, vol. 41, no. 1, January, 1950, pp. 14–19.

[54] Bernal, J. D. Preliminary analysis of pilot questionnaire on the use of scientific literature. *Royal Society Scientific Information Conference Report*, 1948, pp. 589–637. (*See no.* 29.)

[55] Bridson, H. C. The technical library—an essential tool of management. *Industrial Progress and Development*, vol. 9, no. 10, January, 1950, pp. 442–5.

[56] Davis, Jr., Albert S. The library in research. *Special Libraries*, vol. 41, no. 4, April, 1950, pp. 129–32.

[57] Fleming, Sir Arthur, and Dent, B. M. What an industrialist expects of an information service. *Report of the Proceedings of the 21st (Aslib) Conference*, 1946, pp. 47–56.

[58] Hausdorfer, Walter. Special library budgets. *Special Libraries*, vol. 39, no. 5, July–August, 1948, pp. 179–84.

Compares budgets for various types of libraries, illustrating by American examples.

[59] Hufford, Juanita H. Principles to be considered in planning and operating a functional technical reference library. *Special Libraries*, vol. 41, no. 1, January, 1950, pp. 9–13, 36.

[60] Parker, E. W. The organization of information services. In *Report of Aslib meeting on industrial information services*, Aslib, 1947, pp. 10–23.

[61] Smith, A. F. A marine engineer's review of technical information and library services. *Transactions of the Institute of Marine Engineers*, vol. 61, no. 8, 1949, pp. 153–62.

[62] Stevens, Rolland E. The reference survey as an administrative tool. *College and Research Libraries*, vol. 8, no. 3, July, 1947, pt. I, pp. 252–8.

[63] Urquhart, D. J. The distribution and use of scientific and technical information. *Journal of Documentation*, vol. 3, no. 4, pp. 222–31.

[64] Vickery, B. C. Reference aids for the literature search. *Industrial Chemist*, vol. 26, no. 301, 1950, pp. 70–2.

[65] Whitford, R., and O'Farrell, J. B. Use of a technical library *Mechanical Engineering*, vol. 70, no. 12, December, 1948, pp. 987–93.

[66] Wyatt, E. Lillian, G. Elinore DeCou and Elizabeth M. Barton. Budgets and finance. *Special Libraries*, vol. 39, no. 6, July–August, 1948, pp. 175–9.

Deals with fundamental principles applicable to any type of library and is intended to help inexperienced librarians.

5. Buildings and Equipment

[67] Campbell, Donald K. and Goodwin, Clinton Foster. A primer of library planning. *Wilson Library Bulletin*, vol. 20, no. 5, January, 1946, pp. 343–59.

Concise notes under a number of detailed headings regarding points which should be taken into consideration.

[68] Carter, Edward J. The planning and equipment of research libraries and information bureaux. *Report of Proceedings of the 20th (Aslib) Conference*, 1945, pp 65–73.

[69] Laing, Alan K. The architecture of the small library *Library Journal*, vol. 71, no. 11, 1 June, 1946, pp. 809–13.

From the point of view of an American architect.

[70] MacDonald, Angus Snead. New possibilities in library planning *Library Journal*, vol. 70, no. 22, 15 December, 1945, pp. 1169–76

[71] Martin, Alice M. The music library · physical considerations. *University of Illinois Library School Occasional Papers*, no. 2, September, 1949, pp. 10.

[72] Orange Conference, The. A meeting of the Co-operative Committee on Library Building Plans held at the plant of Snead & Company, Orange, Virginia, October 26–28, 1945. W. David, Secretary. Philadelphia, Pa., Charles Stephenson Brothers, 1946, pp. 88. Planographed.

[73] Plaister, Cornelia D. Floors and floor coverings. Chicago, American Library Association, 1939, Library Equipment Studies, no. 2, pp. 75.

[74] Report of Aslib meeting on planning and equipment of special libraries. 6 April, 1946. London, Association of Special Libraries and Information Bureaux, 1947, pp. 33.

[75] The R.I.B.A. new building—no. 7. The library. *Journal of the Royal Institute of British Architects*, vol. 42, 3rd series, no. 1, November, 1934, pp 56–61.

[76] Singer, Dorethea M The insurance of libraries : a manual for librarians. Chicago, American Library Association, 1946, pp. 92.

[77] Stuart, J. C. Stopani. Organizing a research bureau. *Report of Proceedings of the 10th (Aslib) Conference*, 1933, pp. 17–32.

[78] Suggested standards in shelving. *Library Association Record*, vol. 49, no. 11, November, 1947, pp. 278–9.

6. Administration and Methods

(*a*) *Organization in general*

[79] Army Education Scheme. Librarian's handbook. Part I. Unit librarian's guide. London, War Office, 1945, pp. 31.

[80] Collison, Robert L. The cataloguing, arrangement and filing of special material in special libraries. London, Aslib, 1950, Aslib manual no. 2, pp. 76.

[81] De La Bere, John Charles William, and Mary Dyke. The library liason officer system of the Royal Aircraft Establishment. *Aslib Proceedings*, vol. 1, no. 1, January, 1949, pp. 33–41.

[82] D'Haenens, Leon P. F. Comment se documenter dans les petites, moyennes et grandes enterprises. Brussels, Les Editions Comptables, Commerciales et Financières, 1948, pp. 396.

[83] Ditmas, E. M. R. Co-ordination of information : a survey of schemes put forward in the last fifty years. *Journal of Documentation*, vol. 3, no. 4, March, 1948, pp. 209–21.

[84] Ditmas, E. M. R. A chapter closes · Bradford, Pollard and Lancaster-Jones. *College and Research Libraries*, vol. 10, no. 4, October, 1949, pp. 332–7.

[85] Harrison, K. C. First steps in librarianship. Grafton, 1950, pp. 135 8*s*. 6*d*.

Specially written for those working for the Entrance Examination of the Library Association's new syllabus. Directed to students in public libraries and does not touch on any specific special library problem but gives basic information which should be useful to all taking up librarianship as a profession.

[86] Johnston, Barbara. Special library practice : a report on a visit to special libraries in England, France, Canada and the United States of America in 1948. Commonwealth Scientific and Industrial Research Organization, Melbourne, 1949, pp. 81. Privately circulated.

[87] Mitchill, Alma Clarvoe, *ed.* A brief for corporation libraries : a guide for their operation and management. New York, Special Libraries Association, 1949, pp. 59. $1.50.

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AUTHOR INDEX

Akers, S. G., 93
Archer, J., 151
Aries, P., 90
Arnold, D. V., 33, 132

Back, E. A., 145
Bailey, C. F., 229
Ball, M. O., 133
Ball, N. T., 104
Barber, W. S., 53
Barton, E. M., 66
Barwick, G. F., 2
Bateman, M., 281
Batten, W. E., 225
Bennett, F., 153
Bennett, M. A., 189, 204
Bernal, J. D., 54
Best, W., 190
Besterman, T., 3
Binkley, R. C., 191, 192
Bishop, W. J., 260
Björkbom, C., 161, 259
Bloomer, G., 154
Boggs, S., 105
Bolles, W. L., 106
Bowerman, E. G., 163
Bradford, S. C., 107, 108, 125
Brennan, E. F., 226
Brideson, H. C., 55
Briet, S., 261
Brightman, R., 282
Britton, H., 109
Broadhead, E., 146
Brodman, E., 48
Brown, A., 34
Brown, B. M., 230
Brown, E. M., 164
Brown, O. F., 17
Burgess, L. A., 110
Bush, V., 227
Bushnell, G. H., 46

Callander, T. E., 228
Campbell, D. K., 67
Carson, F. T., 147
Carter, E. J., 68
Casey, R. S., 229
Chadwick, Sir D., 18
Chakravorti, S., 148, 149
Chapman, E. A., 194
Clapp, V. W., 19
Clarkson, G. T., 254
Clement, A. G., 134
Clough, E., 150
Coblans, H., 47
Cochran, S. W., 111
Cockburn, J. G., 243
Collison, R. L., 80

Cox, G. J., 229
Crandall, G. S., 230
Crane, E. J., 244

Davidsson, A., 166
Davis, Jr., A. S., 56
DeCou, G. E., 66
De Gorter, B., 195
De La Bere, J. C. W., 81
Dent, B. M., 57, 254
D'Haenens, L. P. F., 82, 265
Dingwall, E. J., 276
Dippel, C. J., 219
Ditmas, E. M. R., 83, 84
Doe, J., 264
Dowden, H. J., 196
Dunsheath, P., 35
Duyvis, F. D., 4
Dyke, M., 81

Egerton, Sir A., 20
Evans, B. A., 21

Fairthorne, R. A., 115
Ferris, L., 231
Fielstra, G. E., 197
Filon, S. P. L., 155, 156
Fleming, Sir A., 57
Fleming, T. P., 48
François, E., 49
Freer, P., 198
Fullman, B., 254
Fussler, H. H., 199

Gaselee, Sir S., 5
Geisler, A. H., 116, 232
Gibson, S. W., 36
Goodwin, C. F., 67
Gorter, A., 167
Gosset, M., 22
Grady, C. C., 6
Gregory, W., 168
Gremling, R. C., 200
Griffith, R. H., 37
Grzegorczyk, P., 169
Guerin, P., 117
Guy, A. G., 232

Hammond, R., 118
Handy, D. N., 40
Harrison, K. C., 85
Harrod, L. M., 256
Hastie-Smith, D., 245
Hausdorfer, W., 8, 58
Headicar, B. M., 277
Hetherington, A. L., 23
Holmstrom, J. E., 119, 135, 285
Hufford, J. H., 59
Hutton, R. S., 278

Irwin, R., 9

Janicki, W., 201
Johnston, B., 86
Jolley, L., 202

Kaiser, J., 120
Kent, F. L., 50, 247
Kirkpatrick, L. H., 121
Knight, D., 24
Kraus, J. W., 265

Lacy, D., 203
Laing, A. K., 69
Lancaster-Jones, E., 157
Le Fanu, W. R., 10
Le Minor, M., 90
Lewis, D. C., 105
Lippert, T. W., 287
Litchfield, D. H., 204
Lowenthal, M., 205
Lück, W., 234
Lydenberg, H. M., 151

McClelland, E. H., 248
McColvin, L., 279
McCrum, B. P., 206
MacDonald, A. S., 70
MacLeish, A., 25
Majumdar, P. C., 148
Manley, M. C., 267
Martin, A. M., 71
Martin, D. C., 26
Matthews, R. B., 136
Mellon, M. G., 288
Merrick, W. J., 158
Mitchill, A. C., 87
Moholy, L., 208
Morgan, K. L., 177
Morley, L. H., 257, 268
Murra, K. O., 88

Newcombe, L., 12, 51
Nicol, T. S., 41
Noyes, I. W., 269
Noyes, R. W., 269

Oathout, E., 122
Oathout, M., 122
O'Farrell, J. B., 65
Orne, J., 95, 123
Ower, E., 27

Parley, N., 254
Parke, N. G., 111, 289
Parker, E. W., 60, 137, 254
Pears, N., 254
Pendleton, O. W., 42

Perry, J. W., 231
Pieterse, J., 138
Plaister, C. D., 73
Pollard, A. F. C., 124, 125
Power, E. B., 209
Preedeek, A., 238
Price, R. F., 159

Ranganathan, S. R., 126, 271
Reizler, S., 90
Richnell, D. T., 183A
Rider, F., 211, 212, 213, 214
Ridley, A. F., 91, 272
Robb, S., 48
Robbins, R. B., 192
Roberts, A. D., 250, 280, 290, 291, 292
Robertson, R. H. S., 134
Robinson, A. M. L., 184

Samain, J., 236, 237
Savage, E. A., 152
Savary, R., 215
Sayers, W. C. B., 127
Scurfield, J. G., 160
Sears, M. E., 96
Sevensma, T. P., 52
Shaw, H. K. A., 14
Shaw, M., 38
Shaw, R. R., 30, 239
Sheppard, R. L., 31
Shires, G. A., 39, 252
Shores, L., 295
Shrigley, I., 296
Silver, H. M., 253
Simon, B. V., 273
Simons, E. N., 254
Sinclair, M., 216
Singer, D. M., 76
Smith, A. F., 61
Smythe, E. J. C., 140
Soule, B. A., 297
Southern, W. A., 274
Spratt, H. P., 15
Spring, E., 240
Stevens, R. E., 62
Strain, P. M., 141
Stuart, J. C. S., 77, 254
Swank, R. C., 99
Swift, G., 95

Taylor, M. S., 100
Taube, M., 101, 251
Thomas, P. W., 43
Thompson, E. H., 258
Tonnon, J. C., 219
Trager, G. L., 129

Urquhart, D. J., 63

Van Alphen, P. M., 218
Van den Berg, R., 90
Van der Wolk, L. J., 219
Verhoef, M., 255
Vickery, B. C., 64
Vormelker, R. L., 16

Walsh, J. W. T., 142
Watts, W. C., 44
Weber, C. G., 147
Weeks, B. M., 143
Wells, A. J., 131
Wells, L., 220
Wilson, H. E., 221
Wilson, W. J., 144
Whitford, R., 65
Whitford, R. H., 275
Wright, J. E., 32, 92
Wyatt, E. L., 66

Mr. Vickery stressed the value to individual libraries of maintaining catalogues of the holdings of other libraries with which they were in contact. In his library he had found it possible to compile a simple index on 5 × 3 in. cards, the entries for which were maintained by hand from the lists of holdings received. In connection with the format and size of periodicals, he had found that editors gave sympathetic consideration to the needs of librarians.

Dr. Urquhart stated that Miss Ditmas had presented Aslib with a difficult paper. He suggested that the Chairman should rule as out of order detailed references to the literature cited. He thought that the volume of literature produced should be reviewed to determine what is really wanted and whether current publications meet requirements. He suggested that the Conference Committee might have explored the possibilities of organizing special groups to examine the literature of special librarianship in detail, and submit their findings to a general session for discussion. Without some such planned approach to the various sections of the literature few helpful conclusions could be reached and the literature would continue to be rather second rate.

Dr. Schultze, speaking in his capacity as Chairman of the Publications and Editorial Committee, said that the Committee thought that this would be a good opportunity for comments by members on the present publications of Aslib. It had been suggested to the Publications Committee that a further journal should be published containing factual articles which, while useful for day-to-day work, were not of the scholarly nature of the papers printed in the *Journal of Documentation*, were too long for *Aslib Information*, which was mainly intended as a news bulletin for Aslib members, and could not be published in *Aslib Proceedings* unless they were read at an Aslib meeting. This suggestion was still under consideration by the Committee, and comments were invited. The Committee were opposed to a lowering of the standard of the *Journal of Documentation*, but a new periodical of intermediate standard—if thought desirable—could not be supplied gratis to members. A possible solution lay in an extension of our *Proceedings* to become *Aslib Proceedings and Notes* which would allow the publication of contributed articles (not read at meetings). The Committee were also paying particular attention to the Aslib *Book-List* and would welcome proposals for further collaborators in the fields already covered, and suggestions for new subjects.

MR. HEWETSON said he thought Aslib should produce a periodical of intermediate level.

MR. HALL suggested that reports on operating experiences and failures would form valuable contributions to the literature on librarianship.

MR. AGARD EVANS suggested that the *Journal of Documentation* might be issued monthly and that the standard required for acceptance be lowered. He would like to see the titles of the section in Miss Ditmas's Select List used as the basis for the Aslib Training Courses.

MISS GOSSET opposed the publication of a new journal, saying there were too many journals dealing with documentation already. She asked if it would not be possible to co-operate with the Library Association in the publication field. Could not the articles of the type suggested for the new journal appear in the *Library Association Record*? She was sure that such co-operation would be of advantage to both bodies.

MR. SHARR joined Miss Gosset in opposing Mr. Agard Evan's suggestion.

MR. SHIRES said that one of the most important tasks of the special librarian was to convey to the executive officers of the organization the special information which they should know. This was not the same as the provision of information on request. Aslib had published several papers dealing with the function of the information officer: he hoped that Aslib would organize the preparation of a paper from the executive's point of view, stating the kind of information that he needed.

MR. STOKES, speaking from the floor, made the suggestion that the Aslib Publications and Editorial Committee should meet the Library Association to discuss the possibilities of collaboration in the publication field. In the past the emphasis had been on the differences between the two associations, in the future he would like the emphasis to be placed on the underlying unity between them.

MISS HENDERSON referred to the new monthly journal of the Library Association, *Library Science Abstracts*, and *Aslib Information*, and said that abstracting services would seem to be an obvious field for co-operation between Aslib and the Library Association, and asked whether there was, in fact, any co-operation.

DR. HASSALL made a strong plea for a list of a selection of foreign trade directories and their locations, and gave several illustrations in support of this.

Replying to the discussion, MISS DITMAS said that she hoped that there would be no move to change the character of the *Journal of Documentation*, since there was clear evidence that although the reading public for it might be small, it was influential and international. She agreed that it would be a pity to start yet another periodical, but thought that there might be some way in which the less 'high brow' articles might, when useful, be included in *Aslib Proceedings*. In reply to Miss Henderson, she said that there had been friendly talks between the editors of *Library Abstracts* and Aslib, and that, though there was a difference between the readers for whom *Library Abstracts* and the *Survey of Documentation* were each intended, careful watch was being kept to judge the degree of overlapping. 'Recent Papers' in *Aslib Information* was not designed as a permanent reference tool, but was intended to draw early attention to papers which might be of special interest to Aslib members.

EXPERIENCES AT THE EARL OF LEICESTER'S LIBRARY AT HOLKHAM

By W. O. Hassall, M.A., D.Phil., F.S.A.

Assistant Librarian, Bodleian Library

HOLKHAM HALL was completed in the middle of the eighteenth century, a monument of the Italianate taste of Lord Burlington and the Earl of Leicester. The magnificent sculpture, pictures, tapestry, furniture, and the library itself, are part of the general architectural scheme. This summer the state rooms have been opened to the public for one day a week.

There are about 20,000 books, of which over 700 are manuscripts and nearly 300 were printed before 1500. The earliest manuscript is a Cicero of the time of Charlemagne. The books in the Long Library and the Tribune have highly ornamental backs stamped with an ostrich, the Coke crest, in gilt.

The nucleus of the library is older than the house by over a century. It is the library of Sir Edward Coke, one of the greatest English legal writers and the prosecutor of Guy Fawkes. He was very proud of his library and drew up a catalogue just before his death. This is being published by the Yale University Law Library. It shows the working tools which he had and the way he arranged them. Divinity is naturally a large section and includes many Roman Catholic books printed up to the death of Parsons, Coke's opponent. These would have been necessary for studying the theoretical background of the plotters and their propaganda. The Law Section is, of course, very strong and many of the legal books contain Coke's marginalia. History is the one subject which Coke continued to collect towards the end of his life. There are many Italian books. These belonged to Sir Christopher Hatton, the Lord Chancellor, who was accused of having danced his way into Queen Elizabeth's favour, and came to Coke by marriage with the Hatton heiress; in them Coke probably took little interest. They were added in blocks to the relevant sections of his library. He never annotated these. Only one of the Italian books is of later date of publication than Hatton's death. Most of the Italian books which retain their original bindings have either Hatton's special armorial or initialed bindings or his autograph on their vellum covers. Hatton's library has just been discussed in detail in an article in the *Library*. The edition of Sir Edward's catalogue indicated which books of his are identifiable at Holkham, and whether they contain marginalia. Only a few of the books at Holkham which belonged to Sir Edward are omitted from his catalogue. These include a group of manuscripts presented to him by their authors. In addition to the library, the estate office contains tens of thousands of documents relating to the 40,000 acres of the estate. Most were acquired by Sir Edward, who took a special interest in conveyancing documents. For Holkham itself there is on average more than one document for every year of the fourteenth century. The library contains a large collection of civil war and Commonwealth pamphlets, and many Restoration plays. These were acquired as they came out, and in a smaller library would receive more attention than they can at Holkham where they are eclipsed. The Restoration plays were the property of the parents of the builder of Holkham. These were the only owners of the library who bought books to read.

The majority of the books were bought early in the eighteenth century by the first Earl of Leicester of the first creation. He was interested in Italian topography, the classics, finely printed books and handsome manuscripts. Finely illuminated manuscripts, Italian *incunabula* and such individual treasures as one of the note-books of Leonardo da Vinci were bought by him. Mr. Coke, of Norfolk, the agriculturalist and admirer of George Washington, is the man whose name is most closely associated with Holkham. He lived so long that he danced with the Pretender's Queen, but did not receive his title as first Earl of the second creation until the accession of Queen Victoria. He fitted up the classical and manuscript libraries with book shelves and took a brief interest in the library, encouraged by the Duke of Sussex and William Roscoe. Roscoe was a scholar, banker and reformer, who was librarian at Holkham after his bank crashed. Advised by him, Coke bought a few books. Less than a dozen numerically; they are of great value and probably account for over half the value of the library from the point of view of interest, money, or scholarship. From the point of view of economic history the strata in the estate office from Mr. Coke's reign are important. In the middle of the nineteenth century a reforming zeal activated owner and librarian. Many dull duplicates were sold and books were bought without which no gentleman's library was thought complete. The 'duplicates' contained books which belonged to Chief Justice Coke, and it seems a pity that they were replaced by volumes which might be interesting in themselves but had played no part in the organic growth of the library.

For a century there have been few losses or accessions. A few necessary reference books like the *Dictionary of National Biography* have been acquired, the taste of the late Earl is commemorated in his set of Roxburghe club volumes, and four manuscripts have been sold for £100,000. The manuscripts included King Harold's aunt among their former owners, but they had not been at Holkham before the early nineteenth century. In 1949 a professional thief ransacked parts of the library, and though he was convicted and sentenced through his indifference to heraldic bindings, not all the missing books were found.

The librarian in the early eighteenth century was a Dr. Ferrari. His salary was the same as his successors, but perhaps his duties were even more exacting. He left his great collection of learned books to his employer. To Roscoe, the Liverpool banker, the library owes most of its outstanding treasures. After him Sir Frederick Madden, later keeper of manuscripts in the British Museum, made a great catalogue of manuscripts. The printed handlist by Seymour de Ricci is only a summary of this work. Madden had differences both with the Earl and the trustees of the British Museum, so he left his diaries to the Bodleian. In the middle of the nineteenth century Chantry made an inventory of the printed books, which has certain shortcomings but still serves its purpose. The Rev. Napier worked also as a stern family tutor. He did not allow his employers to look on any book on any pretext whatsoever. His successor was his son, who gave great satisfaction as he 'played cricket with the boys and never looked at the books'. C. W. James wrote a useful book on Chief Justice Coke and his descendants at Holkham. He was unkindly nicknamed 'a paddle-steamer', because his time was spent puffing contentedly round from peer to peer.

Physical preservation is the first consideration. Damp is the greatest danger and at one time a period without fires during an interregnum between librarians coincided with a need to re-point a wall. Several hundred manuscripts were found damp and had to be dried.

Decay of bindings has been arrested in parts of the library by the application of the mixture recommended by the British Museum. The late Earl applied this personally to about 5,000 books.

The great interest of the library is not only that it is an assemblage of books, often not available elsewhere. Over and above that, it is important as one of the few great old historic libraries which show what was available in a great country house in the eighteenth century, and what a Jacobean lawyer had in his study. Old cathedral and college libraries survive, but their slant is ecclesiastical and academic. The recurrence of death duties means that the possibility of a future sale cannot be left out of the reckoning of any custodian. From the point of view of an owner or scholarship as a whole, it is important to study groups of books as unities so that if any dispersal is necessary from time to time it can be as harmless as possible. Neglect or ill-informed attention can indeed be more harmful.

The books in the Tribune are chosen for being elephant folios to fill niches intended for sculpture sunk at sea; those in the Long Library are selected for the suitability of their bindings in their architectural setting; those in the manuscript library for being written by hand; and those in the classical library for being early or valuable printed books. In sections of the tower library are assembled the libraries of Sir Christopher Hatton and Sir Edward Coke, rearranged as far as possible as in 1634, and the collection of the Restoration theatre-goer. Any form of subject classification is impossible, but the handsome books in the Long Library are largely grouped according to language. The interests of owner and scholar almost invariably coincide. The Earls have not allowed their books to be examined in the absence of a librarian, but they have always generously put his time at the disposal of serious enquirers. Several hundred of the manuscripts and all the Court-rolls in the estate office have been microfilmed. Dr. Paecht has examined every illuminated manuscript in the house and in return produced a handlist by date and school. A student of seventeenth-century political thought has examined all the books containing Sir Edward Coke's marginalia. Indeed, in one year, more individual manuscripts were deposited in the Bodleian for the temporary use of scholars than came from any of the college libraries. In order to answer enquiries and make material available, experience shows the importance of paying more attention to certain individual books or groups of books than others. Far the most interesting manuscript at Holkham is a so-called Bible Picture Book, made for popular instruction about 1331. No transcript can make it truly available as its importance lies in the pictures, of which there are 80 pages. From the point of view of letting the learned world know what is knowable from Holkham manuscripts, and from the point of view of interesting visitors or preserving what is most important for posterity from possible destruction, the study of this manuscript is desirable. Lord Kelmsley proposes to publish it in colour facsimile and I am at present producing a commentary.